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AUTHOR Yin, Robert K.; Gwaltney, Margaret K.
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ABSTRACT

Three case studies of interorganizational collaboration between regional education agencies (REAs) and school districts illustrate how successful knowledge utilization occurs. Researchers studied how knowledge utilization services in four areas--staff development, linking agent assistance, information retrieval, and broad organizational issues--were supplied to their school districts by the Wayne County (Michigan) Intermediate School District, the Northern Colorado Educational Board of Cooperative Services, and the Educational Improvement Center-South (New Jersey). For each case study, data were collected from REA documents, field observation, and field interviews with staffpersons from the REA, school districts, and the state education agency. Results showed that successful interorganizational collaboration could be explained by six factors: (1) services were user-oriented; (2) services were supported by external resources; (3) REA and district staffs formed active interpersonal networks; (4) the state mandated collaboration; (5) collaboration yielded mutual benefits for REAs and school districts; and (6) federal and state regulations and policies facilitated cooperation. To test these explanations, further research is needed on other types of interorganizational arrangements and on knowledge utilization itself. Appended to the report are data on all states' REAs and a copy of the field questionnaire. (Author/RW)

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ORGANIZATIONS COLLABORATING TO IMPROVE EDUCATIONAL PRACTICE

EA 013 969

March 1981

ORGANIZATIONS COLLABORATING TO IMPROVE EDUCATIONAL PRACTICE

Robert K. Yin

Margaret K. Gwaltney

Abt Associates Inc.
Cambridge, Mass.

Washington, D.C. Office:
1521 New Hampshire Ave., N.W.

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PREFACE

The immediate roots of this study come from experiences on another investigation: Abt Associates' study of the R&D Utilization Program. The authors had examined various aspects of this program, including the role of regional education agencies (REAs). The R&D Utilization Program, however, was a time-limited, federally-sponsored effort--supported by the National Institute of Education from 1976 to 1979 (the Abt Associates research, under the general direction of Karen Seashore Louis, will be completed this year). What we wondered was whether these REAs also provided longer-lasting, more significant lessons in improving interorganizational collaboration.

Out of this curiosity was born the present study. Our goal has been to determine the conditions under which organizations collaborate successfully, without reference to any specific federal program. Regional-local relations appear to be increasingly important, because local school districts are not always able to justify the full array of educational services; some services--such as providing information to improve practice, or what we have called knowledge utilization services--may be more economically provided by a regional facility that serves many school districts. As school enrollments have declined, these regional arrangements have become more critical.

Our interests also matched a broader realization that educational services remain an intergovernmental, and hence interorganizational, effort. Regardless of the federal role in education (which seems to be undergoing re-examination in Washington these days), local school districts do not alone provide education; state departments of education, other external organizations such as the REAs and university groups, as well as federal agencies all must collaborate to produce educational services. Thus, our inquiry, though limited to one topic, knowledge utilization, is also intended to suggest potential lessons about *interorganizational collaboration* more generally. This topic appears to be a major gap in current research, and our own effort is an attempt to stimulate further investigation along these lines.

Of course, our study must also be recognized for its limitations. Because of the modest level of effort, we would not claim to have arrived at definitive conclusions about inter-organizational arrangements. Such conclusions can only emerge after a broader array of studies, including ones that use different methodologies as well as study sites. Until such variations are attempted, one would not know the full range of generalizations for our findings, or indeed whether our findings can be corroborated. We strongly urge other investigators to pursue these related lines of inquiry.

We also urge research-funding agencies, even in times of sparse support, to pursue interorganizational themes. This is because educational policy--whether centrist or decentrist, liberal or conservative--will continue to be implemented through a complex network of different organizations. To the extent that the collaborative relationships among these organizations is poorly understood, educational policy is likely to be inefficiently and poorly implemented. No student, or parent, or teacher--much less policymaker--should be satisfied by that observation.

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EXECUTIVE SUMMARY

Knowledge Utilization As An Interorganizational Process

When a local school district improves its services, it is often assisted by another organization--e.g., the state department of education, an independent research organization, or a university group. A new idea is transmitted by one of these organizations to individuals in a local school district. The idea may then be put into practice, a process known as *knowledge utilization*

This study covered one particular type of interorganizational arrangement--between local school districts and regional education agencies (REAs).* In this arrangement, which exists in numerous states across the country, several school districts are served by a single REA, which is a regional unit of government. The services can include a wide variety of classroom, administrative, computer, and information services. The study intensively examined three REA arrangements:

- The Wayne County Intermediate School District (Wayne ISD), Michigan, and its 36 school districts;
- The Northern Colorado Educational Board of Cooperative Services (NCEBOCS), Colorado, and its 6 school districts; and
- The Educational Improvement Center-South (EIC-South), New Jersey, and its 144 school districts.

These three arrangements were selected because they had been successfully operating for a number of years. The three differed in several ways, however. Each served a different combination of urban, suburban,

*There is considerable variation in the names used for these agencies (e.g., intermediate service agencies, educational service agencies, and boards of cooperative services. The general term "regional education agency" (REA) has been selected as the most appropriate parallel to the prevailing use of two terms: state education agency (SEA) and local education agency (LEA).

and rural populations of students and each existed within a different state structure and legal mandate. Each arrangement was visited twice (spring and fall, 1980), and each provided numerous documents and records about its activities.*

The main topic of investigation was how these arrangements worked successfully to provide knowledge utilization services. The study especially examined three types of services provided by all of the REAs: *staff development*, or inservice training for workshops, conferences, and other meetings; *linker assistance*, in which an REA staff person acts as a linking agent and provides in-person assistance relevant to specific school problems; and *information retrieval*, which makes materials available on a wide range of educational topics, based on requests from individual school personnel. Together, these three types of services represent the major knowledge utilization services that can exist between two collaborating organizations. To this extent, the collaborative principles may apply to other interorganizational arrangements, and not just the ones that were studied.

The Role of Interorganizational Arrangements

All of the services studied had been in operation for a number of years. All were providing timely and relevant information to school personnel, on both core and special curriculum topics, as well as on administrative topics. The topics included longstanding and newly-emerging school problems, such as:

- Reading improvement at both elementary and secondary levels;
- Methods for evaluating tenured teachers (to implement a new state directive in New Jersey);
- Ways of improving career education;

*The study is reported in two parts: Robert K. Yin and Margaret K. Gwaltney, *Organizations Collaborating to Improve Educational Practice*; and Robert K. Yin, Margaret K. Gwaltney, and James Molitor, *Case Studies of Three Interorganizational Arrangements*.

- The design of new programs for gifted and talented children; and
- The teaching of classroom skills, such as learning how to ask more effective questions.

Moreover, all of the services were continually adjusting to new needs. For instance, REA personnel noted that school administrators--including new school board members--were becoming important users of information services, which had traditionally catered mainly to teachers.

Sources of Service Support. Some of the services only called for collaboration between an REA and a group of school districts, but a few also involved other organizations--e.g., local universities in giving academic credits for staff development courses, the state department of education in providing library resources for an information retrieval service, or a local research organization in providing linker assistance. Whatever the arrangement, the bulk of these services was supported by federal or external funds, and not by users' fees from the participating school districts.

This pattern of external support characterized a service's operations over the years, even though the relevant state or federal programs might have changed. Currently, ESEA's Title IV-C funds, the National Diffusion Network, ESEA's Title IV-B funds, and NIE's State Capacity Building grants have been the most prominent sources of federal support. External support also tended to be a significant part of the operations of the REA as a whole, with federal and state-funded projects being about 40 percent of the Wayne ISD's and NCEBOCS's revenues, and about 80 percent of EIC-South revenues.*

Uses and User Satisfaction. Interviews with individual school personnel indicated a general satisfaction and enthusiasm about these

*The total budgets varied, depending upon the size of the REA's target population and the scope of its services. The Wayne ISD, for instance, serves school districts with about 450,000 students, providing a large number of classroom and administration services, in addition to knowledge utilization services. In contrast, the NCEBOCS (serving about 80,000 students) and the EIC-South (serving about 275,000 students) tend to limit themselves to knowledge utilization services. Other regional agencies in the states provide the school districts with administrative and computer services.

services. Moreover, there were numerous requests for them. Some difference in frequency of use were seen among the three arrangements, however. The NCEBOCS was used less extensively than the other two REAs and this in part reflected a declining level of effort by that organization. Because the NCEBOCS relied more heavily (than the other REAs) on fees from its member school districts, and because the districts' contributions have been reduced by declining enrollments, the NCEBOCS gradually reduced its services--to the extent that the heads of two of the knowledge utilization services (staff development and information retrieval) only work on a part-time basis. This experience may be an example of the problems that arise when external resources are not available or are difficult to obtain.

The ultimate value of the knowledge utilization services provided by the three REAs was hard to assess. The availability of new information does not always have to result in changed educational activities. The information may be used to initiate planning activities, may lead to a better understanding of a situation, or may help a teacher confirm the worthiness of an existing practice. The major goal of the study, however, was not to conduct an evaluation of these services, but rather to analyze how they were produced in the first place.

Explanations for Successful Knowledge Utilization

Occasional service problems notwithstanding, the REAs and their member school districts had developed an active and satisfactory collaborative arrangement. Parallel experiences among the three REAs suggested the most prominent reasons for this outcome. Foremost was that the services were operated in a *user-oriented* fashion. Although such a conclusion may appear obvious, each service nevertheless had taken extra steps in this direction. The services continually tuned themselves to user needs during at least six phases of service activity: assessment of needs, design of services, service operations, maintenance of a knowledge base, implementation assistance, and follow-up information.

A second reason was related to *external resources*: Organizations collaborated effectively when the joint venture could be supported by external resources. The resources may have been federal funds for information service programs (e.g., Title IV-C, NDN, Title IV-B, and NIE's State Capacity Building grants), or state funds. Most important, such resources meant that users' fees did not have to support the service. In general, such fees are likely to be an unsound basis for financing knowledge utilization services, possibly because such services consist of intermediate benefits (e.g., the fulfillment of a specific number of requests for information or the transmission of specific pieces of information). These benefits cannot be assessed directly in terms of their contribution to school improvements, even though the connection may be an important one. The only fee structure, however, would have to focus on these intermediate benefits, but because of their indirect relationship to school improvement, users are unlikely to pay such fees in comparison to other priorities.

A third reason was related to the behavior of the REA and school district staffs: The more these persons participated in *active, professional networks*, the more successful a service was likely to be. The network-building activities went beyond the common gamut of professional activities, such as attendance at professional conferences and the exchange of written materials. Instead, they also included:

- Monthly meetings of REA governing boards, which included, in all three cases, the school superintendents from the member school districts (i.e., users);
- Career mobility and promotions from school districts to REAs, resulting in a new REA staff person already having an informal set of "user" contacts; and
- Consistency and longevity of service by key staff members, avoiding the disruption of the network that can follow job turnover.

A productive network meant that people had individualized contacts with each other and could exchange ideas on a continual basis, creating a

marketplace for ideas. The network activities helped to make people more aware of current school problems and to be more alert to possible solutions. Though the payoffs cannot be cast in specific terms, the payoffs have to do with the fundamental aspects of knowledge utilization services: visibility, credibility, and responsiveness to users' needs.

A fourth reason was that the *collaborative mandate* established by the state legislation provided a favorable environment for the interorganizational arrangement and therefore helped the knowledge utilization services to be more productive. The mandatory rather than voluntary participation of the LEAs in the interorganizational arrangement especially helped to sustain the services. The districts frequently sought assistance from the REA, because of their integral involvement in the arrangement and a long-term and stable relationship between the two types of organizations thus developed.

A fifth but less important reason was the ability of the participating organizations to derive *mutual benefits or exchanges* from the services. In the staff development programs in the Wayne ISD and the NCEBOCS, for example, special courses were designed to address school problems. Teachers taking the courses paid a fee but received graduate-level credits because the courses were also sponsored by a local university; the universities provided instructors and course credit, in return for increased enrollment in their courses; the REAs coordinated the entire program and provided administrative support, in return for gaining further credibility and contacts with school personnel. In the case of the Wayne ISD, this type of arrangement, not based on any formal agreements, has allowed the service to operate for 13 years.

Explanations for More Complex Collaborative Arrangements

These five reasons may do more than explain the past. They may also be considered in the design of any new knowledge utilization service requiring collaboration by two or more organizations. The findings of the study therefore appear applicable to numerous information activities, not necessarily limited to education.

The study went one step further, however. It also examined the role of third-party organizations--e.g., federal and state agencies--who

may issue mandates affecting knowledge utilization services, but who do not participate directly as the producers or the users of the service. When there is such a third-party organization, the knowledge utilization service may be affected by the interactions among all three types of organizations, and not just the *simple* interorganizational arrangement between an REA and its member school districts. In such *complex* arrangements, the third-party organizations can facilitate the information services by being sure that any demands placed on a school district are congruent with those on the REA (and vice-versa). Further, if the third-party organization provides external resources among with these mandates, interorganizational collaboration will be promoted. Whatever the objectives of a third-party organization, however, the pertinent policies must be installed for a sufficient period of time so that collaboration can occur. In particular, federal or state programs should be discouraged from changing their regulations from one year to the next; collaborative arrangements between organizations simply cannot be formed or broken on such a rapid basis.

Further Research

The findings from this study provide new information about how organizations collaborate to provide knowledge utilization services. Additional research is needed to corroborate these findings, however. The accumulation of findings from several studies would then allow federal and local policymakers to design and direct the knowledge utilization process so that it is most productive.

Research should focus on two topics. First, other interorganizational arrangements should be studied. The studies should contrast the interorganizational approach to knowledge utilization with other approaches (e.g., an intraorganizational approach). The research should also confirm the results with nonexemplary arrangements, should further examine the network-building process, and should investigate the effects that different sources of funding have on the success of interorganizational arrangements. Second, research should be conducted on the design and implementation of knowledge utilization services,

regardless of whether they are provided within an interorganizational arrangement or not.

Potential Policy Implications

Several policy implications emerged from the study, even though any definitive actions cannot be made solely on the basis of a single research study. First, all organizations in a complex interorganizational arrangement should collaborate and jointly seek external resources to support knowledge utilization services. Second, these organizations should encourage interpersonal and interorganizational communications. Third, service-providing organizations should attempt to recruit new staff members from the clientele population of the area that they serve, in order to promote and facilitate network activities. Fourth, third-party organizations (e.g., federal and state agencies) should recognize the potential effect that their actions might have on the productivity of interorganizational arrangements. Previous research has failed to alert us to the interorganizational combinations that are most and least successful.

Conclusions

The present study was based on three case studies of interorganizational arrangements. In general, these arrangements produced satisfactory knowledge utilization services to the extent that they:

- Had access to external resources;
- Developed interpersonal networks; and
- Involved mutual exchanges and appropriate collaborative mandates.

These arrangements were made more complex, however, by organizations (state departments of education) that served in third-party, intergovernmental roles. Under these circumstances, the arrangement was still productive to the extent that mutual exchanges and congruent demands were created.

The study represents one of the few that has explicitly examined interorganizational arrangements in knowledge utilization. Further research is therefore needed to corroborate the findings. At the same time, the findings suggest significant insights into interorganizational collaboration, which tend to be a common arrangement for improving educational practice.

ACKNOWLEDGMENTS

The authors have incurred numerous debts in conducting this research. We hope that this report, as well as its companion volume,* will partially offset some of these debts.

First, we thank Ward Mason, our project monitor at the National Institute of Education, for having laid out the basic questions about interorganizational arrangements. Ward's suggestions at the outset of the study, as well as his comments throughout its conduct and completion, have been consistently thoughtful and helpful.

At Abt Associates, we thank four colleagues who worked together on the R&D Utilization study and who contributed in one way or another to the present study. Karen Seashore Louis kept us on the interorganizational track and reviewed drafts throughout the entire study; her advice was timely and insightful. James Molitor collaborated with us on certain aspects of the study, including coverage of the Colorado and New Jersey sites, and his perspective from prior school-level inquiries broadened our own views. Sheila Rosenblum initially helped to design and plan the study, and later provided comparative commentary from the perspective of her own, ongoing study of efforts to assist teachers. Diane Kell also worked efficiently in making initial contacts with our candidate sites.

A variety of other experts in the field also gave us the benefit of their own views and ideas. William Firestone (Research for Better Schools) made helpful suggestions during the design stage, partially reflecting his own ongoing study of REAs in New Jersey and Pennsylvania. Charles Haughey and Naida Bagenstos, both at the National Institute of Education, commented extensively on earlier drafts of this report. Matthew Miles (Center for Policy Research) and Milbrey McLaughlin (The Rand Corporation) served as our official reviewers and provided

*Robert K. Yin, Margaret K. Gwaltney, and James Molitor, *Case Studies of Three Interorganizational Arrangements*, Abt Associates, Cambridge, Mass., 1981.

constructive comments. Finally, Richard Brickley (Research and Information Services for Education) helped us during all phases of the study, including advice on design, data collection, analysis, and reporting; we most enjoyed Dick's rendition of the educational world, from both an educational as well as political perspective.

Our attempts to maintain contacts with potential "users" of our findings were made easier with the assistance of two other individuals. Robert Stephens (Stephens Associates) shared some of the unpublished findings from his survey of REAs, as well as suggestions about the candidate sites to be studied. Walter Turner (American Association of School Administrators) led us into the network of educational service agencies and arranged for our participation in the annual meeting of this group at the AASA meeting in Atlanta in February 1981. We hope our findings will be useful to them.

The report could not have been produced without assistance at Abt Associates from Georgette Wright, Jackie Thomas, and Linda Clowe in the Washington, D.C. office. All of these people at one time or another suffered from our impatience and impertinence, but all produced what was needed whenever it was needed. Linda even produced a baby girl, on the eve of our final report preparation.

The true collaborators in this study, however, have been our major informants. These include: George Grimes, Director of the Professional Resource Center at the Wayne County Intermediate School District (ISD); William Miller, Deputy Superintendent at the Wayne ISD; Sherwood Wilson, Director of the Educational Improvement Center-South; and Frank Anderson, Director of the Northern Colorado Educational Board of Cooperative Services. We thank each of these people and their staffs for giving their time to talk with us at length about their agencies and the knowledge utilization services they provide. Each of these people has also reviewed the final draft of this report and the case study of their organization, which appears in the companion volume. Their comments have been extremely useful and have helped us to be more accurate and clear in our analysis. Finally, we thank each of them for their hospitality during our site visits.

None of the above assistance should imply any responsibility for our report. The authors alone are responsible. Similarly, the points of view do not necessarily represent the official position of the National Institute of Education, which supported this study under Contract No. 400-79-0062.

Chapter One

DEFINING THE KNOWLEDGE UTILIZATION PROBLEM

Knowledge Utilization: Ideas into Practice

School improvements can occur in many ways. One such way is when a new idea is put into practice, a process known as *knowledge utilization*. If the ideas, furthermore, are initially developed by sources outside of the school, a delicate transfer of information--from one organization to another or from one person to another--must be sustained in order for utilization to succeed. How such collaborative arrangements work to improve educational practice is the topic of this report.

The last fifteen years have increasingly focused on this process of making new ideas available to improve educational practice.* Some early efforts, like the ESEA Title III program (Berman and McLaughlin, 1974-1978), stimulated projects at the local level. Other efforts were less direct but also important. For example, in the 1960s, the need to improve social science knowledge in education led to the establishment of regional labs and centers and the National Institute of Education (see Dershimer, 1976; and Sproull et al., 1978), as well as to new programs in related federal agencies (e.g., National Science Foundation, 1969). Support for these programs was based primarily on the belief that an increase in R&D efforts, combined with appropriate dissemination, would encourage knowledge utilization.

More refined strategies have emerged in the last few years, partially as a result of lessons learned from the earlier efforts. In particular, the newer initiatives have been to develop collaborative arrangements of individuals, organizations, or both (for examples, see Far West Laboratory, 1978; and Raizen, 1979). The arrangements have

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*Technically, "utilization" may be said to occur even if no change in practice occurs; for instance, practitioners may receive confirmation of existing practices or achieve a better understanding of the context, problems, or solutions of their situations. The intent of this report is to use utilization in this broader sense, throughout.

been found essential because the new ideas frequently come from a source other than the practice setting, where the ideas are to be applied. For example, the National Diffusion Network (NDN) was founded in 1974 by the U.S. Office of Education. The NDN attempts to bring new knowledge, mainly developed by local school practitioners themselves, to bear on new practices in elementary and secondary education. The NDN network consists of:

1. Persons who have developed new educational programs (i.e., "developers"--staff persons in one LEA);
2. Persons who are interested in applying these programs in their own schools (i.e., "adopters"--staff persons in another LEA); and
3. Persons responsible for increasing communications between the first two sets of people (i.e., "linking agents"--staff persons in another organization, such as a state department of education).

A similar set of collaborative arrangements, supported from 1976-79 by the National Institute of Education (NIE), was the R&D Utilization (RDU) program. This program operated in seven areas around the country. However, because NIE only supported this network for a time-limited demonstration period, the collaborative activities have diminished since 1979, although individual organizations may have continued some functions (see Louis et al., 1979).

In spite of these strategies, the key public policy questions about them remain unanswered:

- *How* do collaborative arrangements operate to achieve knowledge utilization objectives, and
- *Why* do the arrangements that perform successfully operate as they do?

Straightforward as these questions may appear, they have not been the dominant issues addressed by previous research on knowledge utilization in education. As an example, a major set of papers on networks (see Miles, 1978) concentrated mainly on the structural characteristics of collaborative arrangements or on the potential goals to be served by the arrangements. None of the papers attempted to explain how or why arrangements operate as they do.

Outside of education, the prime example of such a collaborative arrangement is the agricultural extension service, consisting of the A&M university efforts (who act as "developers"), extension service agents (who act as "linking agents"), and farmers (who act as "adopters"). The service has been credited with numerous advances in farming practices over a long period of time. As a result, policymakers have wanted to consider similar initiatives in other service fields, such as education (Bean and Rogers, 1977). However, the situation in agriculture differs in significant ways from that in education (see Louis and Sieber, 1979)--especially because the individual practitioner in one case (agriculture) has an independent enterprise, but in the other case (education) is part of a hierarchical governmental structure. Moreover, the hierarchical structure is not part of a singular organization, but consists of a "loosely-coupled" set of organizations (Weick, 1976). For these and other reasons, the experiences in agriculture may not be applicable to those in education.

In short, collaborative arrangements may be an effective way of promoting knowledge utilization, and thereby improving educational practice. The following investigation is intended to improve our understanding of how these arrangements work, especially to inform policymakers about the relationships between their decisions and the operation of these arrangements.

Utilization as an Interorganizational Process

Any investigation of this topic must first distinguish clearly between interorganizational and interpersonal arrangements. This is because the relationships, collaborative efforts, and other inter-unit

communications may all differ significantly, depending upon which of these two types of arrangements is involved.

Interpersonal arrangements involve communications or social systems of solo "practitioners" (e.g., doctors, lawyers, professors, consumers). Whether these practitioners are organizationally based or not, the essential network involves individual relationships; no organizational roles or units are relevant. The arrangements may be informal (e.g., "invisible colleges"--see Crane, 1972) or they may be membership-based (e.g., a professional association). Regardless of these differences, the individual person is the key unit in the arrangement, and the communication processes may be analyzed in terms of the traditional approach to the diffusion of ideas (e.g., Rogers and Shoemaker, 1962; and Rogers, 1962).

Studies of interpersonal arrangements tend to dominate the older literature on the utilization of new ideas (e.g., Havelock and Benne, 1969; and Havelock, 1973), with the individually-based communications systems ultimately connecting knowledge with practice. Thus, for instance, Hood's (1973) article on educational roles and institutional structures focuses on the flow of information: (a) within the R&D community, (b) between the R&D community and practitioners, and (c) within the practitioner community (see Hood, 1973). The main feature is that all of the important "elements" of the arrangement are defined in terms of unstructured groups of individuals. Any attempt to analyze the operations of these types of arrangements must therefore be dominated by interpersonal (e.g., Rogers, 1962) and intrapersonal processes (e.g., Argyris and Schon, 1974).

In contrast, *interorganizational* arrangements involve linkages between two or more organizations. Such arrangements may also involve key interpersonal relationships, but the role behavior of an individual is constrained, sometimes to a great degree, by the norms and regulations of the organization to which the individual belongs. Thus, the United Nations represents an arrangement of participating governments; though the work of the U.N. is mainly conducted by individual representatives, the major agreements and collaborative linkages are formalized in terms of interorganizational (i.e., intergovernmental) pacts.

Interorganizational arrangements can also serve knowledge utilization functions. As mentioned previously, the National Diffusion Network attempts to link state and local school departments in encouraging the implementation of new educational practices (Emrick et al., 1977; and Campeau et al., 1979). Similarly, NIE's R&D Utilization program (Louis et al., 1979), NSF's Urban Technology System, and other ad hoc relationships between institutions of higher education and local school districts (Havelock, 1979; and Chin, 1979), all represent interorganizational arrangements dealing with knowledge utilization.

There are clearly situations in which this basic distinction between interpersonal and interorganizational arrangements becomes highly mixed. The longstanding agricultural extension service, for instance, represents a collaborative effort among organizations (e.g., the A&M universities and the field stations), but also represents strong interpersonal connections (e.g., field agents and individual farmers). Similarly, many of the efforts of educational dissemination programs are mixed; of the programs reviewed by Emrick and Peterson (1978), one (ESEA, Title III) actually involved no interorganizational arrangements; one (NDN) was an interorganizational arrangement established on a long-term basis; and two (Pilot State and Technical Assistance) were interorganizational arrangements supported for limited periods of time. However, the reason for making this distinction at this point is not to attempt a full typology of interorganizational arrangements, but to appreciate that the study of interpersonal and interorganizational arrangements must proceed along different paths. In the interpersonal case, individual processes of communication, collaboration, and conflict would be the main functions to be examined--e.g., a study of "human resource networks" (Sarason, 1977). However, in the interorganizational case, the main processes would be organizational ones--e.g., a study of the collaborative efforts among different levels of government (federal, state, and local).

Of these two types of arrangements, the present study deliberately focuses on the interorganizational type. This is partly because federal policy in education has been dominantly an organization-related policy. Federal awards and regulations, for instance, are more likely to deal

with other organizations--e.g., state departments of education and local school districts--than with practitioners directly. Of course, there can be any number of teacher and practitioner-oriented programs, such as the awarding of special fellowships to individual practitioners or the provision of support to professional associations; the bulk of the federal programs, however, deals with organizations rather than individuals.

A second reason for working with interorganizational arrangements is that such arrangements may be more robust and enduring than interpersonal ones. The increased role of state departments of education is but one example of this robustness, with such departments of education serving as an important node in many educational arrangements, including NDN and a variety of NIE's programs. In fact, two insightful analysts of educational policy have suggested that the state departments should become even more important focal points in the future, serving as the main link between federal agencies and area-wide and local agencies (Berman and McLaughlin, 1978).

A final reason for focusing on interorganizational arrangements is that they may be effective in achieving knowledge utilization. The early evidence on the National Diffusion Network, for instance, suggests that practitioners have been pleased with the assistance they have received and are now more willing to work with new ideas (Emrick et al., 1977). Whether such ideas actually lead to improved performance, either by the teacher or by the student, is not yet known, but is also not entirely relevant to the knowledge utilization process. A major outcome of the utilization process will have been achieved if a new idea has simply been applied to practice.

In summary, the following study is about how organizations collaborate to improve school practice. The next chapter describes the conceptual framework for the study; subsequent chapters indicate the findings from intensive *case studies of three interorganizational arrangements*. The main rationale for conducting these case studies was to determine whether consistent patterns could be found in a few instances; if so, a larger research effort may be warranted in the future.

Chapter Two

ANALYZING INTERORGANIZATIONAL ARRANGEMENTS

This chapter describes the broad aspects of our investigation: its conceptual framework, the three interorganizational arrangements that were selected for study, and the methods used in the study.

A. CONCEPTUAL FRAMEWORK

Outcomes of Interorganizational Arrangements

Outcomes. Any specific interorganizational effort, involving knowledge utilization, may produce an array of outcomes.* These may be direct goods and services, including (e.g., see Dissemination Analysis Group, 1977; Miles, 1978; and Paisley, 1978):

- Product catalogs or other information embodied in some physical form (e.g., a report);
- Information disseminated through non-face-to-face verbal communication, whether dealing with a site's needs or with potential solutions to a problem (e.g., responses to telephone inquiries);
- Similar information but exchanged through face-to-face communication (e.g., on-site assistance);
- Training or educational endeavors (e.g., workshops and conferences) in which the participants, rather than a problem, are the main focus of attention; and

*It should be noted that, in opting for this definition of outcomes, we are implicitly subscribing to a service-based model of utilization. An alternative model would be an equity-based one, in which the primary outcome might be regarded as a balancing of power or influence among the organizations within the arrangement--or a balancing of power between the interorganizational arrangement as a whole and its external environment (see Miles, 1978, for a discussion of these and other models). We believe, however, that the service-based model is the most useful one, drawing directly from a knowledge utilization effort's immediate functional goals, rather than its potential political goals (see also Peterson, no date).

- Shared facilities (e.g., multi-media facilities and computer systems).

Utilization Outcomes. The outcomes also include utilization outcomes, both intermediate and ultimate. Intermediate utilization outcomes refer to: (1) the number of services offered, and (2) the number of users of these services. Ultimate utilization outcomes refer to how the knowledge given in the course of the services was used, including:

- Initiation of a planning or assessment activity;
- A change in educational practice (i.e., an innovation);
- Changes in perceptions and attitudes about the educational process that do not necessarily manifest themselves in a changed practice; and
- Confirmation that an existing practice need not be changed.

Dysfunctional Outcomes. A third set of outcomes is more difficult to assess, but is an integral part of any judgment about collaborative arrangements. These outcomes have to do with dysfunctional results, the most serious of which may be considered the costs of collaboration. Such costs are not the financial costs incurred by an interorganizational arrangement (e.g., Paisley et al., 1978). Rather, the dysfunctional outcomes cover such items as:

- The added time needed to reach a decision because more participants must be consulted;
- The users' inability to attribute knowledge or assistance they have received to a particular individual or agency, thereby reducing the visibility or credit given;
- The confusion of responsibilities that may be created by an interorganizational arrangement--e.g., the degree to which, because of the existence of the arrangement, inquiries are made to the *wrong* party; and

- The costs associated with role ambivalence--e.g., where high personnel turnover occurs among linking agents as a result of conflicting or ambiguous demands on their work (such turnover could also occur at an organizational level, where specific organizations may enter into or drop out of the arrangement at an undesirable rate).

The examination of dysfunctional outcomes, more than goods and services or utilization outcomes, must be regarded as exploratory. Little has been done in previous research to articulate, much less measure, these types of outcomes. Yet, any individual who is part of an interorganizational arrangement can readily report instances where there were dysfunctional outcomes due to collaboration.

In summary, interorganizational arrangements formed to promote knowledge utilization may be depicted as having three types of outcomes: goods and services outcomes, utilization outcomes, and dysfunctional outcomes. None of these outcomes covers improvement in school or student performance--which is an outcome that would complete the conceptualization of the entire knowledge utilization process. These performance outcomes are usually determined by a wide array of factors, however, and are not limited to the effect of knowledge utilization services. For this reason, performance outcomes are inappropriate for assessing such services.

The main goal of any knowledge utilization service should be to maximize the benefits in terms of goods and services and utilization, and to minimize the dysfunctional outcomes. For the purposes of improving these services in the future, policymakers need to know the conditions under which the services are most likely to achieve this goal.

Explanations for Successful Interorganizational Collaboration

To the extent that interorganizational arrangements in knowledge utilization are successful--i.e., over a period of years they deliver goods and services and lead to utilization while reducing dysfunctional outcomes--the reasons for success need to be examined. Such reasons,

or explanations, would provide the basis for designing appropriate policy interventions.

These explanations have to do with the functional relationships among the organizations. Five alternative explanations have been prominent in previous research. These are that:

- Organizations successfully collaborate because they derive *mutual exchanges* from each other (e.g., see the "exchange" theory of Levine and White, 1961; and Van de Ven, 1976);
- The organizations collaborate because they are able to increase their *access to external funds or governance opportunities* (e.g., Benson, 1975);
- Organizations are given *mandates to collaborate* as in a legislated set of functions; under this condition, the creation of the necessary statutes and regulations would alone cause an arrangement to operate;
- Organizations collaborate because they develop *formal agreements* between each other, specifying the responsibilities of each participating organization (Goodlad, 1975); and
- Organizations collaborate because they have conflicting goals, and the collaboration allows the organizations to *mediate their conflicts in a socially approved manner* (e.g., Litwak and Hylton, 1962; Peterson, no date; and Hall et al., 1978).

The mutual exchange explanation focuses on exchanges among the organizations within an arrangement. The second explanation focuses, in contrast, on the external relationships of the arrangement as a whole. Thus, the collaborative organizations would derive benefits not mainly from themselves, but from the external environment. The ability to attract federal funds or to increase an arrangement's "turf" would be examples of such benefits. The third explanation follows a compliance model, whereby organizations are said to collaborate simply

because they are mandated to do so. According to this model, the strength of the mandate would be sufficient to guarantee collaboration. An illustrative mandate would be the passage of state legislation or regulations calling for particular organizations to coordinate their activities. The fourth explanation is where organizations voluntarily enter into a relationship with one another, as in a treaty or pact among governments. The fifth and final explanation is different because it focuses on the conflicts that may exist among different organizations. Tension and conflict reduction would be seen as the main motivation for collaboration, rather than the derivation of specific benefits or compliance with specific mandates.

Whereas the preceding five explanations are all based on references to interorganizational phenomena, interpersonal functions are also potentially relevant to successful interorganizational collaboration.* The main difference between interorganizational and interpersonal explanations, aside from focusing on a different unit of analysis, is the degree of emphasis given to key individuals and their roles. Thus, the most extreme individual-based explanation would propose that interorganizational collaboration only occurs where specific networks of individuals have been formed. The interpersonal networks may have preceded the formation of a formal interorganizational network, and successful collaboration among organizations would just be an accident of where the individuals happened to be working. For example, if a successful linking agent first worked for an educational laboratory or center, the individual-based explanation would predict that the lab or center might, for that period of time, be part of a successful interorganizational arrangement with a set of LEAs. However, if that linking agent then changed jobs and became employed by another organization, the prediction would be that the new organization would now displace the lab or center as part of the interorganizational arrangement. Organizational relationships, in other words, would follow interpersonal relationships.

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*Note the distinction between using interpersonal relationships to explain interorganizational collaboration, and the study of interpersonal networks (discarded in Chapter One). Our study entertains the former, but not the latter.

Even without assuming such an extreme explanation at the individual level, there may be several reasons why interpersonal functions are important to interorganizational arrangements (e.g., Corwin, 1972). These reasons have not been especially articulated with regard to educational systems, as most of the existing literature simply notes the importance of "boundary personnel," linking agents, coordinators, or facilitators, but does not attempt to explain the possible reasons for collaboration (e.g., Thompson, 1967; Parker, 1977; and Rogers, 1979). However, one may consider the following potential explanations:

- The organizations collaborate because individuals derive *mutual exchanges* from each other, making specific job-related tasks easier to perform;
- The organizations collaborate because individuals are able to achieve *self-fulfillment goals*, as in cases where individuals simply enjoy performing "matchmaking" or information-exchange activities; and
- The organizations collaborate because individuals are able to *advance their career development* and employment opportunities.

As with the organization-based explanations, it can be seen that these individual-based explanations also involve different conditions. For example, ongoing research in a related study of the R&D Utilization program (see Louis et al., 1979) suggests that each of these explanations is a reasonable way of thinking about the motivations of linking agents and other personnel in an interorganizational arrangement.

Specific Knowledge Utilization Services

These interorganizational outcomes and explanations cannot be studied at a global level. To assess any given situation, attention must be focused on a specific knowledge utilization service. Such services, for the purpose of this study, are defined as activities in which educational information is transmitted from a source outside of an LEA to a teacher or administrator within the LEA. This transfer of information may occur in three ways:

- *Staff development*--e.g., the holding of workships or other inservice training sessions;
- *Linker assistance*--e.g., assistance by an external person (linker) in dealing with some school problem; and
- *Information retrieval*--e.g., the provision of specific items of information, as may be requested by phone or in person.

In most interorganizational arrangements, there are specific projects or programs involving one of these three activities. Each activity tends to have its own mandate, procedures, resources, and staff personnel. Federally-sponsored activities have also tended to be organized around one of these three themes. The Teachers' Centers program, for instance, is dominated by staff development; NDN is dominated by linker assistance; and the NIE State Capacity Building program has frequently supported information retrieval activities operated by a state department of education.

These service activities therefore act as the specific settings within which knowledge utilization may be studied. The relevant outcomes and interorganizational conditions needed by each type of service may vary, but evidence can be collected regarding the specific operations of each. In the present study, all three types of services were the specific focus of attention within a given interorganizational arrangement.

Summary of Conceptual Framework

Overall, the aim of the present study is to advance our understanding of how and why interorganizational collaboration produces the desired knowledge utilization outcomes. The investigation will first document the nature and extent of the outcomes in three case studies, and then relate these outcomes to the potential array of explanations. Three types of outcomes and eight types of explanations will be especially examined. The outcomes include goods and services, utilization, and dysfunctional outcomes; the explanations include (at the

organizational level) mutual exchanges, access to external funds, mandates to collaborate, formal agreements, and conflict mediation, as well as (at the interpersonal level) mutual exchanges, self-fulfillment, and career advancement. The relationships between outcomes and explanations will be examined in the context of three types of knowledge utilization services: staff development, linker assistance, and information retrieval.

B. INTERORGANIZATIONAL ARRANGEMENTS IN EDUCATION

Several different types of interorganizational arrangements, all aimed at promoting knowledge utilization, currently exist in education. The establishment of regional labs and centers and the founding of the NDN previously have been mentioned as two examples of federal initiatives. Among units of government, a third is an arrangement involving *regional education agencies* (REAs).* These agencies, which have emerged in many states over the last fifteen years, collaborate with SEAs and LEAs to improve educational practices.

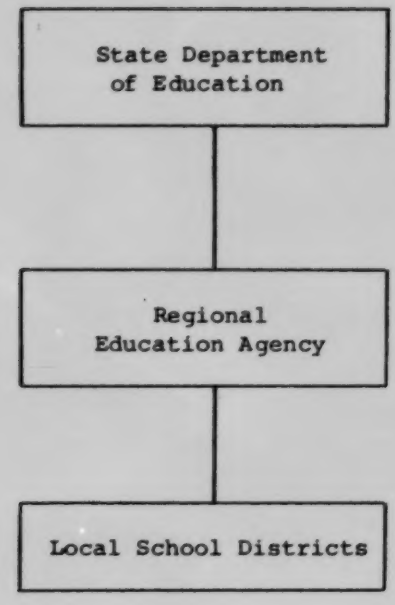
The general relationships among these three different types of organizations--i.e., SEA, REA, and LEA--are shown in Figure 2-1. The relationships meet the basic requirements for an interorganizational arrangement (e.g., Hood, 1978; Paul, 1978; and Far West Laboratory, 1978), generally satisfying five conditions (Van de Ven, 1976; Parker, 1977; and Miles, 1978):

- The participating organizations overtly announce a shared sense of purpose;
- The organizations emanate from or establish formal collaborative agreements to work on specific services;
- Specific organizational employees or units are assigned to act in liaison or linking capacities with regard to the other organizations;

*There is considerable variation in the names used for these agencies (e.g., intermediate service agencies, educational service agencies, and regional education service agencies). We have selected the term regional education agency (REA) as the most appropriate parallel to the prevailing use of state education agency (SEA) and local education agency (LEA).

Figure 2-1

MAJOR COMPONENTS OF INTERORGANIZATIONAL ARRANGEMENTS THAT WERE STUDIED



- Mutual decisionmaking among members of different organizations takes place; and
- Interorganizational units (e.g., ad hoc coordinating committees) are formally created.

The arrangements exist because of the passage of state legislation, defining the role of REAs as intermediary units. As a result, the corresponding SEAs, REAs, and LEAs may enter into service agreements; the REAs may employ staff who serve as linking agents; and there may be mutual decisionmaking units (e.g., an REA's board of directors generally consists of LEA superintendents).

Regional Education Agencies (REAs) as a National Resource

The importance of REAs in the knowledge utilization process is evident from a policy perspective. The REAs are part of an interorganizational arrangement that has access to knowledge, access to practitioners and users, and sufficient linkages between these two. The REAs also present a significant opportunity for policy action, because they exist in all regions of the country. Furthermore, they have had a stability of operations over time and have not been transient arrangements. The arrangements have not been based on the assumption of long-term federal support, but have mainly been supported by state and local funds. In short, the REAs enjoy both political and bureaucratic legitimacy.

The significance of this interorganizational arrangement (SEA-REA-LEA) can be appreciated more fully when it is realized that, in education, much of the knowledge produced as a result of federal efforts must be applied at the local level; hence any attempt to promote knowledge utilization must involve organizations at different governmental levels. In summary, an REA arrangement is an excellent focal point for knowledge utilization because it:

- May include, jurisdictionally, a state department and local school districts and therefore involves basic *economies of scale*;

- Is *service oriented* and thus more likely to excel in utilization activities (cf. a university research group);
- Has *broad potential applicability* in that every state could have such arrangements (as of 1978, about 39 of the 50 states had such a system);
- Has *political and bureaucratic legitimacy* in that it is part of the educational system's intergovernmental structure (cf. a nonprofit organization that is not part of this structure); and
- Is basically *supported by state or local funds*, although it is usually eligible to be supported by federal funds as well.

Few other types of interorganizational arrangements, including the use of federally supported R&D centers, the provision of direct assistance by nonprofit or university organizations to LEAs, direct linkages between university groups and local school districts (see Havelock, 1979; and Chin, 1979), or even the coordination of several LEAs (see Guba and Clark, 1976; Lotto and Clark, 1978; and Hood, 1978, for enumerations of these combinations), appear to satisfy all of these criteria. At the same time, the REAs are in a formative stage of their development (Stephens et al., 1979b). This means that policy findings could have an important impact on the activities of the REAs in many states.

Historical Development of Regional Education Agencies

The number of states that have established some type of regional education agency for knowledge utilization purposes has increased during the last fifteen years. This emergence of REAs, however, should not be confused with the traditional county superintendencies* that existed in public education for almost 150 years (Delaware was the first state to enact the necessary legislation for county superintendents in 1829--see Knezevich, 1969). These county superintendencies

*The term refers to a jurisdiction rather than a position.

were established to provide administrative services (e.g., compiling information and reports on enrollments, school expenditures, programs, and teachers, etc.) in an economic fashion, to school districts. For small and rural districts, for example, the county offices often provided the only administrative leadership (Davis, 1976).

The role of the traditional county offices diminished in the 1920s and 1930s. During this period, school districts began to consolidate. Thus, as the number of LEAs dropped from over 127,000 in 1932 to around 17,000 in 1971 (Stephens, 1975), fewer districts needed the administrative services that the county offices had traditionally offered; LEAs were now large enough to provide these services themselves. Similarly, local districts did not want to be controlled, even indirectly, by the state departments of education. The LEAs did not need the services of the county offices, nor did they want them; instead, they wanted to be independent organizations.

The value of some sort of regional unit, however, was not dismissed entirely. Although local districts were now capable of providing many administrative services on their own, how they could provide various other types of services remained a question. Local districts were thus confronted with new problems. Among these were how to provide inservice training for teachers, educational and support services for handicapped children, and assistance to teachers and administrators in developing innovative curricular and instructional programs (Davis, 1976).

The actions taken by the states to respond to this new need varied. Some states abolished the old county offices and enacted legislation to establish new intermediate units to perform these service functions. Other states reorganized their county office systems and gave the new regional units the responsibility for providing a wide range of educational and knowledge utilization services. Michigan, in 1962, was one of the first states to convert its numerous county superintendencies to a set of 58 intermediate school districts.* Other states quickly

*Davis (1976) notes that New York, in 1948, was actually the first state to establish a state system of intermediate agencies, or Board of Cooperative Educational Services (BOCES).

followed, and, according to a nationwide survey, 39 states are now reported to have some type of intermediate unit different from the traditional county superintendency (Stephens, 1978).

Federal legislation had an important influence on the rapid increase in the number of new regional education agencies (Knezevich, 1969; Stephens, 1975; and Texas Education Agency, 1976). The Elementary and Secondary Education Act of 1965 (ESEA), and particularly Titles I, II, III, and VI of this Act, provided incentives to state and local school districts to establish new and innovative educational programs and services. Title III, for example, provided grants to local school districts for innovative and model educational programs. Title III funds were also available to establish supplementary educational centers, and this enabled some school districts to develop organizations that, in some instances, were the precursors of the later, more formalized regional education agencies. Moreover, because of the growing number of federal education programs, many of which supported educational initiatives at the local rather than the state level, there arose an increasing need for regional agencies that could oversee and, in some cases, even administer these new programs.

As can be seen, the new regional education agencies placed an emphasis on service rather than administrative functions. In addition, the focus was on providing services in response to LEA demand, rather than at the request of the SEA. Although the SEA often worked with the REA, sometimes even asking it to carry out state mandates, states recognized that the service relationship with the LEAs who were members of the REAs needed to be preserved in order to insure the regional agencies' survival.

The Universe of Regional Education Agencies

Regional education agencies are not limited to a particular area of the country.* Within states, however, REAs generally serve more suburban and rural school districts than districts in urban areas. The

*The reader should be reminded that the following discussion refers entirely to the new types of REAs that have been formed, and not to the traditional county superintendencies that may still exist.

reasons for this are obvious--urban school districts are larger than suburban and rural districts and are consequently more able to provide the services that REAs usually offer. Thus, in those states where legislation requires or permits the establishment of REAs, the legislation may stipulate that the urban districts within the state may not join an REA (e.g., Iowa, New York) or may require the urban districts to form their own REAs (e.g., Pennsylvania).

Two studies (Davis, 1976; and Stephens, 1979a) provide some general descriptive data on REAs in each state, and both studies classify regional education agencies into several types. Davis categorizes the regional agencies according to the legal basis for their operation within the state and according to whether LEA membership in the REAs is required or not. Using this classification scheme, the study identifies four types of REAs: (1) *mandatory*--those REAs whose formation is mandated by state legislation and in which LEA membership is required; (2) *mandatory/voluntary*--those whose formation is mandated, but in which LEA membership is voluntary; (3) *permissive*--those REAs whose formation is encouraged, but not mandated, by state legislation and in which membership is therefore not required; and (4) *no legislation*--those REAs whose formation is not directed by any legislation. Appendix A (Table A-1) lists the states with each type of REA. Of the thirty-four states, nine had REAs operating under mandatory legislation; five states had mandatory/voluntary legislation; eleven states had permissive legislation; and nine states had regional agencies that were operating with no specific legislation.

Stephens classifies the REAs somewhat differently from Davis, by trying to incorporate functional with structural characteristics. The classification is based primarily on variations in four central characteristics. Thus, *special district* REAs tend: (1) to be authorized by state legislation, (2) to be under lay control, (3) to have services determined by SEAs and LEAs, and (4) to have mixed sources of fiscal support. *Cooperative* REAs, in contrast, tend: (1) to have general authorizations, (2) to be under LEA control, (3) to have services determined by LEAs, and (4) to be primarily funded by LEAs, with some SEA and federal support. Finally, *regionalized* REAs tend: (1) to be

authorized by state regulations only, (2) to be under professional advisory control, (3) to have services determined by SEA priorities, and (4) to be primarily funded by the SEA.

The states that, in 1978, had some type of regional agency are listed in Appendix A (Table A-2). For each state, the type of regional agency existing in the state, using Stephens's classification, is indicated. As is shown, the same state may have one, two, or all three types of REAs. Special district REAs exist in twenty-three states; cooperatives are present in twenty-six states; and regionalized REAs exist in twelve states. Each type of REA is able to receive federal funds, although, as has been noted previously, regionalized REAs tend to receive only a small portion of their funds from federal sources. Each type can also provide knowledge dissemination and utilization services.* Again, however, regionalized REAs are more likely to perform administrative and regulatory, rather than service (and thus knowledge utilization), functions (e.g., New Jersey),** and cooperatives in some states (e.g., Illinois) provide only a single service, such as special education, rather than a broad range of educational programs.

Criteria for Selecting Interorganizational Arrangements for Study

Of the REAs in the universe, those selected for the present study had to satisfy several criteria. *First, they all had to provide services to local school districts.* Although the intensity of the REA's involvement with each of its member LEAs could vary, and although the type of services offered could also vary, the essential condition was that an REA had an interorganizational arrangement with a group of LEAs. *Second, the REAs had to be intensively involved in providing knowledge dissemination and utilization services.* Some REAs may only

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*Knowledge dissemination and utilization services cover four program and service areas that were surveyed in the Stephens (1976) study. These are: curriculum services, research and development, staff development, and information services.

**It is interesting to note, in fact, that each state with regionalized REAs also has cooperative and/or special district REAs. Thus, it is these latter two types of REAs that usually provide the knowledge utilization services to LEAs in these states.

provide direct educational services, such as classroom instruction in special education, and because such services were not directly relevant to the present study, such REAs were not considered eligible for study. *Third, the interorganizational arrangements had to represent exemplary cases of knowledge utilization.* Six criteria had to be met for the knowledge utilization services of REAs to be called exemplary:

- The REA had to provide some type of knowledge utilization service to two or more school districts;
- These services had to cover the three types previously described--i.e., staff development, linker assistance, and information retrieval;
- The services had to have produced some evidence of positive effects on at least the goods and services outcomes and the intermediate utilization outcomes previously defined;
- The knowledge being provided had to deal with the mainstream needs of elementary and secondary schools and not be limited to narrow curriculum topics such as vocational education;
- The services had to have been ongoing for several years, or have been provided in such a manner as to suggest a permanent rather than transient relationship; and
- The services had to have been conducted frequently enough or with enough intensity that at least several REA staff were involved in the activity.

The first four of the above requirements were derived from the basic policy and research objectives of the study; the last two were based on the need to find sites that would have a robust activity to be studied.

Selection of Candidate Sites

These criteria became the basis for developing a list of candidate sites. The process for developing this list involved several steps. First, recent studies that described interorganizational arrangements

were reviewed for those states in different parts of the country that had some type of regional education agency. Second, state departments of education were contacted, and the individual most familiar with the state's REAs was asked to recommend those REAs in the state that were intensively involved in providing knowledge utilization services. Third, each REA that was recommended was then contacted, and the director of the agency was asked if the REA might be studied. If the director indicated a willingness to cooperate in the study, he was then asked to describe the specific services that the agency provided and to send any available written materials about the REA's services. Additional information about the size of the REA's budget, the size of the staff, the number of local districts and students that the agency served, and the type of local districts that were members of or fell within the catchment area of the regional agency was also requested. Fourteen interorganizational arrangements emerged from this process (see Table 2-1), and these arrangements thus became the candidate sites from which the final three interorganizational arrangements were selected.

The fourteen candidate sites are not necessarily representative of the universe of REAs. Although each of the candidate sites satisfied our selection criteria, other sites might have emerged as candidates had the identification process been different. Thus, our process of contacting state departments and asking individuals to recommend candidate sites within the state was central to our arriving at the eventual list of fourteen. It should be noted, however, that any method that is used to identify candidate sites, short of a formal sampling approach, will be biased in some way. In this study, a formal sampling approach was neither feasible nor necessary. This was because the selection of exemplary, rather than representative, sites was the foremost consideration, in order that the reasons for the success of interorganizational arrangements in achieving knowledge utilization could be documented.

Final Selection of REA-LEA Arrangements

From the list of fourteen candidate sites fitting the basic criteria for inclusion in the study, three interorganizational arrangements were selected. Although the three were to satisfy the common criteria,

Table 2-1

CANDIDATE REAS AND SELECTED CHARACTERISTICS

Candidate Sites	Region	Recent Annual Budget ($000)	Knowledge Utilization Services Only	Knowledge Utilization & Educational Services	Type of LEAs Served	Number of LEAs Served	Number of Students Served (000)	Size of Staff (FTEs)	LEA Participation
Northern Colorado Educational Board of Cooperative Services (Longmont, Colorado)	West	1,400	X		Suburban Rural	6	83	37.5	Voluntary
Southern Indiana Education Center (Huntingburg, Indiana)	North Central	245	X		Rural	25	34	3	Voluntary
Grant Wood Area Education Agency # 10 (Cedar Rapids, Iowa)	North Central	14,000		X	Rural	39	68	400	Mandatory
Wayne County Intermediate School District (Wayne, Michigan)	North Central	52,000		X	Suburban Urban	36	465	NA	Mandatory
Educational Service Unit # 2 (Fremont, Nebraska)	North Central	NA	X		Rural	114	16	32	Voluntary
Educational Service Unit # 3 (Omaha, Nebraska)	North Central	2,000	X		Suburban	20	60	55	Voluntary
Educational Improvement Center-South (Sewell, New Jersey)	North-east	3,000	X		Urban Suburban Rural	144	237	75	Mandatory
Educational Improvement Center-Northeast (West Orange, NJ)	North-east	NA		X	Urban Suburban	NA	NA	NA	Mandatory
Multnomah Educational Service District (Portland, Oregon)	West	NA	X		Urban Suburban	12	89	NA	Mandatory
Region 10 Educational Service Center (Richardson, Texas)	South	NA	X		Urban Suburban Rural	81	246	275	Voluntary
Region 13 Educational Service Center (Austin, Texas)	South	6,000	X		Suburban Rural	53	112	150	Voluntary
Regional Education Service Agency # 3 (Charleston, W. Va.)	South	600	X		Urban Suburban	4	62	10	Voluntary
Cooperative Educational Service Agency # 3 (Gillett, Wisconsin)	North Central	2,700	X		Rural	21	22	53	Mandatory
Cooperative Educational Service Agency # 6 (Chippewa Falls, Wisconsin)	North Central	6,000	X		Rural	25	38	73	Mandatory

they were also to be selected to vary along several dimensions, so that they would represent the major types of regional education agencies. The following variations in the REA-LEA arrangements were therefore to be represented in the final selections:

- The REAs were to be regionally dispersed;
- The REAs were to be distributed to cover urban, suburban, and rural districts;
- The REAs were to be both large and small, in terms of their budget and the number of LEAs and students served; and
- The REAs were to serve LEAs that participated in the interorganizational arrangement *voluntarily* and paid membership fees, as well as LEAs that were *mandated* by state legislation to be included within an REA, but that paid no fee for their participation in the interorganizational arrangement.

C. METHODS OF STUDY

For each interorganizational arrangement, the relationships between knowledge utilization outcomes and explanations were examined through three case studies. The present section describes the rationale and design of the case studies.

Rationale for Using Case Studies

The use of case studies to study interorganizational arrangements is appropriate for several reasons. First, the *context* within which knowledge utilization services exist is potentially relevant to the operation and ultimate success of these services. The case study is a means of examining the effects of an interorganizational arrangement on the provision of a specific knowledge utilization service and is especially useful, because it allows a full exploration of the contextual factors.

Second, *multiple sources of evidence* are usually required to establish the specific facts about an interorganizational arrangement. Organizational documents, personal interviews, and direct observation can all provide relevant information, and the case study is again the most appropriate research strategy under these circumstances.

Finally, any investigation of this sort must begin with the assumption that the subject of inquiry is a *complex organizational process*, whether the issues deal directly with the interorganizational arrangements, with the knowledge utilization services, or both. Although research strategies other than the case study may be more appropriate when the process can be subdivided into a meaningful set of components, any subdivision at this time would be premature. In this regard, current understandings of knowledge utilization are not far different from the state-of-the-art in understanding organizational implementation issues more generally. As pointed out by one group of investigators (Greenberg et al., 1977), investigations of such complex organizational processes must appreciate that the phenomena being studied involve:

- A series of decisions that occur over a long period of time, with no clear beginning or end points;
- Outcomes whose direct and indirect implications are too complex for single-factor theories;
- A large number of relevant participants; and
- Situations that are potentially special in terms of agency context, historical moment in time, and other key elements.

Not surprisingly, a recent review of exemplary studies of the implementation process revealed that the majority of these studies used a case study approach (Yin, 1980).

Case Study Design

Design Objectives. Little documentation exists on the range of possible case study designs or data collection methods that might be used to study complex processes. One design is the *single* case study, where a specific case may be viewed as a critical test of a theory, much

like the role of a critical experiment. The use of *multiple* case studies, however, is more appropriate in this situation than the use of a single case, because the same phenomenon (in this case, knowledge utilization) is thought to exist in a wide array of situations. Under these circumstances, each individual case study must still be rigorously conducted, but the collection of several case studies on the same topic is intended to be the basis for generalizing to a broader array of situations.

Whatever the specific design for a multiple case study investigation, the following objectives are relevant:

- The case studies need to develop procedures that facilitate the *cumulation of evidence around specific issues* rather than around specific respondents or documents;
- The information collected must be able to accommodate *quantitative as well as qualitative evidence*;
- *Comparable procedures* need to be followed in conducting the individual case studies, even though the specific activities, respondents, and available documents may vary from one case study to another;
- The case study design must include a specific plan for *cross-case synthesis* rather than merely producing an array of individual case studies; and
- The design must be flexible enough to allow for *serendipitous and idiosyncratic discoveries* in the process of conducting and analyzing the cases.

General Considerations. Existing investigations that have used case studies under these conditions have described their research designs only briefly. Patton (1978), for instance, conducted case studies of 20 evaluations in the field of health. The methodological discussion indicates how the 20 were selected from a large pool of 170 candidates and also indicates the three types of respondents that were interviewed for each case. However, the single cases are not reported

and the synthesis across cases follows some implicit logic not specified at the outset of the study.*

Some of the difficulties in conducting multiple case studies have been described by Miles (1979), who reviewed his own experiences in designing individual case studies and conducting cross-case analysis. Some of the pitfalls identified by Miles, however, are avoidable, and a response to Miles's article (Yin, 1981) suggests specific ways in which data collection and data analysis can be conducted in an acceptable manner. Moreover, a new study by Robert Herriott (personal communication) will review a wide range of previous experiences in conducting multiple case study investigations in the field of education, for the purpose of deriving general methodological lessons.

For the present study, explicit procedures were used to meet the previously listed design objectives. First, control over the quality of the investigation was exercised by having the data collection for individual case studies conducted by the senior authors. In other words, data collection was conducted by persons familiar with the overall substance of the study. This procedure is essential in the conduct of case studies, because many discretionary activities may occur during the data collection process, and may be contrasted with the use of research assistants in survey or laboratory research, where the discretion of the investigator is to be minimized. Typical discretionary activities that may occur include: identifying, in the field, any new leads that might be relevant and that therefore warrant unanticipated data collection; deciding how much evidence to collect from different sources before a "fact" or "finding" may be considered robust; deciding what questions are relevant to different respondents; and adapting questions to match respondents' knowledge and expertise.

Second, comparability of data collection and analysis was furthered through the use of a formal protocol, which included a

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*Numerous other case study investigations, especially in the field of education, are similarly brief in their methodological documentation, even though some of these (e.g., Berman and McLaughlin, 1974-1978) do present the individual case studies. The single exception to this observation is a study by Alkin et al. (1979), which involved five case studies on the uses of evaluation in education. This study gives a rich description (pp. 29-43) of the rationale and design for within-case as well as cross-case analysis.

description of the procedures to be followed, the sources of evidence to be examined (including a list of the types of interview respondents), and a substantive outline of the issues to be addressed. The relevant evidence was considered to be both quantitative and qualitative measures of service operations and outcomes.

Logic of Selection, and Comparison Across Cases. The fundamental role of a research design is to establish a logic of comparison, which in turn is used to support causal inferences. The traditional research design literature (e.g., Campbell and Stanley, 1966), however, ignores the situations in which infrequent or complex phenomena need to be studied, and in which the necessary number of cases to support statistical analysis is unavailable. Such situations, for example, may be found in laboratory or clinical experiments, where a particular phenomenon may be too risky (e.g., certain surgical lesions in animals) or too infrequently found (e.g., certain personality syndromes) to assemble the experimental and control "groups" needed for the traditional designs. To deal with these situations, a whole array of "small n" experimental designs has been developed and documented (e.g., Hersen and Barlow, 1976; and Kratochwill, 1978), and the logic for making causal inferences has still been retained.

The most common design under these conditions is a *direct replication design* (Hersen and Barlow, 1976, pp. 327-356), and the case study analogue* of this design was applied in the present study. The purpose of the design is to determine whether a specific phenomenon can be found in repeated instances under predictable conditions (internal validity). For such a design, the use of three or four cases has been found sufficient. Then, if the phenomenon is found to occur in all cases, the concluding step is to develop a general explanation or synthesis across the cases. This may later lead to the selection of cases that establish the variability of conditions under which the predicted phenomenon occurs (external validity), and such a design may be considered a *systematic replication design*. However, the present study

*A key point to be remembered is that case studies, like experiments, are a research strategy. In contrast, case studies are not to be considered but one of several research designs. Thus, case studies have their own designs. This issue is further described in Yin, 1981.

stopped short of using the systematic replication design because of a limitation on time and resources; such an extension of the research may be considered for future investigations.

As previously indicated, three interorganizational arrangements were selected for study because they were known, through prior contact, to have been operating extensive knowledge utilization services over a multi-year period of time and to have shown positive goods and services and utilization outcomes in knowledge utilization. In this sense, the three case studies were regarded as exemplary instances of interorganizational arrangemenzs. The strategy that was used therefore was one of selecting *extreme* or deviant, and not necessarily representative, cases (Patton, 1980, p. 101). Such a strategy was warranted in the present study, because the overall goal was to uncover the relationships between interorganizational arrangements and knowledge utilization, and exemplary instances were the ones needed at the outset to document this relationship.*

A further consideration in using a direct replication design is the timing of the data collection for the case studies. A choice must be made whether to conduct the fieldwork (or data collection) sequentially, with adaptations made as appropriate from one case to the next, or simultaneously. Most multiple case studies are implicitly designed as simultaneous cases, even though they may be executed sequentially in the field. In general, however, little attention has been given to this issue. The present study addressed the issue directly by purposely incorporating two rounds of fieldwork for each case study. Thus, the initial case studies were written after one round of data collection (spring 1980), explanations for each case were compared, and the final case studies were only assembled after a second round (fall, 1980). The second round was specifically designed to search for information gaps

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*A complementary, subsequent step, not undertaken as part of the present study, would then be to select other, nonexemplary cases, and to confirm predictions that could be made about these cases from the exemplary experiences. In this way, causal inferences can be confirmed. Note, however, that the inquiry into the nonexemplary cases can be highly targeted and limited to the critical points; moreover, a full, case study narrative need not be written of these nonexemplary cases. This subsequent step would be an example of a systematic replication design.

that were identified after the first round, and not for any longitudinal reasons. In this manner, insights that might only have been developed from one case during the first round could be corroborated for the other two cases during the second round.

Within-Case Design. For each case study, the same within-case design was followed. Evidence was collected about four activities:

- A staff development service;
- A linker assistance service;
- An information retrieval service; and
- Any broader organizational issues that appeared to affect these three services.

The first three activities were selected because they represented the basic way in which information can be transferred. The fourth activity was deemed important, because it set the first three activities within a context that was potentially relevant for explaining the operation and outcomes of the other three activities. Thus, knowledge utilization outcomes and conditions were examined for each of three services within each case study. The analysis of each service's activities meant that information about the service itself, its outcomes, and its relationship to broader organizational issues within the REA-LEA arrangement was collected and analyzed.

Data Collection Procedures

A data collection guide was developed and used in each case study (a copy of this guide is contained in Appendix B). The guide indicated the questions for which information was to be collected from interviews, documents, or field observations. The questions contained in the guide were developed on the basis of existing research about knowledge utilization and from the conceptual framework described in Section A of this chapter.

Data collection then occurred in four ways. First, each of the three sites (an REA) was contacted by telephone or mail, and each sent relevant materials about its knowledge utilization services. From these materials and corroboratory phone calls, three specific knowledge

utilization services, representing the general categories previously described, were selected for each site.

Second, field visits were made to each site during the spring of 1980. Data were collected primarily from the REA, but information from the appropriate SEA and LEAs was also gathered. Thus, the case study included information about the entire interorganizational arrangement, and not just about the REA. The data collection guide was used in these field visits, along with a field protocol specifying the ways in which information was to be collected. The protocol specified that, at a minimum, the following persons were to be interviewed at each site:

- The director of the REA;
- The person in the REA, if not the director, who had the most direct responsibility for knowledge utilization activities;
- The project director for each of the three knowledge utilization services (staff development, linker assistance, and information retrieval) that had been selected;
- Other key REA staff persons involved in these three services;
- The official in the SEA who had the most direct responsibility or relationship to the state's REAs;
- Other officials in the SEA who were primarily responsible for relevant federal programs that supported the REA's knowledge utilization services (typically, the Title IV-C program coordinator, the NDN coordinator, and the State Capacity Building program coordinator); and
- LEA users of the three knowledge utilization services, with at least one user per service, but often more (a user could be a teacher or an administrator).

Similarly, the protocol specified the types of documentary evidence that could be relevant, including project memoranda; examples of the

materials being disseminated or used by the LEA personnel; schedules, agendas, minutes, and other official records of programmatic activities; budgets, logs, and other tabulations of the services provided by the three knowledge utilization services; and other reports, proposals, and documents about these services.

Third, telephone contact was maintained with each site after the first round of field visits. Supplementary information to fill gaps left during the field visits was often transmitted during these telephone calls or was sent by mail. Once drafts of the case studies were completed, they were reviewed by the major field informants. Comments received from the informants were then used to revise the drafts or to plan additional data collection activities.

Fourth, a second round of field visits was made in the fall of 1980. The second round called for second interviews with the major personnel, supplemental interviews with key persons who might have been absent during the spring visit or who might have been identified as important in the intervening period, and the collection of further documents.

Each of the case studies and the corresponding fieldwork was conducted by two members of the investigating team. Three members of the project staff, including the two authors of the present report, rotated so that a different pair of investigators was responsible for each case study.

Data Analysis

Data analysis occurred in two steps that are critical to the direct replication design. The analysis was first done within each case study, and only secondly across cases. Though these two steps appear straightforward, they are not always followed in multiple case studies, with the result that the aggregate lessons, if any, may not be appropriate to any single case.

Explanation-Building. The primary means of within-case and across-case analysis was the testing and development of explanations for why the knowledge utilization services operated as they did. Thus, each case study documented the outcomes of the knowledge utilization services

and described the service operations, in quantitative and qualitative terms. The case studies concluded with a discussion of the various explanations for the success of these operations. Explanations that previously have been suggested as relevant (see Chapter Two) were tested but, where necessary, new explanations were developed.

The explanations were then compared across cases, and the synthesis is presented in Chapters Four and Five of this report. The most notable feature of this synthesis is that the identities of the individual cases are preserved throughout the analysis.

Explanation-Building vs. Extraction of Factors. This explanation-building approach for cross-case analysis should be contrasted with another approach that is often used for multiple case studies. The second approach involves the extraction of specific factors from each case, and the aggregate analysis consists of an interactive analysis among the factors (e.g., Rothman, 1980).

The problem with using only the latter approach is that it potentially destroys the context for any specific case, thereby creating an "average" case that may be only a mechanical reconstruction of essential site conditions. The approach is appropriate where a specific factor or two have been previously hypothesized as critical; however, it is inappropriate when the purpose of a study is to construct and analyze a process about which little has been previously known (Yin, 1981). Under such conditions, the premature extraction of factors can oversimplify (and misrepresent) the following phenomena:

- The temporal sequence among organizational events;
- The substitutability of factors in any given individual case;
- The potential interactions among the factors; and ultimately,
- The establishment of causal relationships.

By comparison, the explanation-building approach covers more complex phenomena, and can also lead to new insights not previously countered by the investigators in addition to testing existing explanations. In

the present study, Chapter Four shows how both of these possibilities occurred. In particular, the phenomenon of network-building had not been anticipated by any existing explanations; at the same time, some of the existing explanations were also found to be relevant.

Summary of Methods Used

Case studies were the primary research strategy for conducting the investigation. Individual case studies of three interorganizational arrangements were conducted (the individual case studies are reported in a separate volume of this report). The selection of cases was based on a direct replication design, in which it was assumed that the same phenomenon was under investigation in each case, and the goal was to show that the same conditions existed in each case. Thus, the individual case studies all documented the outcomes and operations of a set of knowledge utilization services, and concluded with a set of explanations for the success of these services.

Synthesis across cases was done by comparing the individual explanations after an initial round of data collection. The evidence from each case was then assembled in parallel form, preserving the integrity of events at each site but developing a more general explanation. The more general explanation was still applicable to the individual cases that were studied, but was assumed to be potentially relevant to other interorganizational arrangements dealing with knowledge utilization.

In the following chapters of this report, the aggregate evidence for service outcomes and operations are presented in Chapter Three, the development of the general explanation for these outcomes is presented in Chapter Four, and the research and policy implications are considered in Chapter Five.

Chapter Three

OUTCOMES OF THREE INTERORGANIZATIONAL ARRANGEMENTS

Individual case studies, each covering an interorganizational arrangement involving an REA, provide the basic evidence for the remainder of this study. Although the full case studies are contained in a separate report,* the present chapter gives the major characteristics of each arrangement as well as the major knowledge utilization outcomes that were found.

Case Studies of Three Interorganizational Arrangements

The three REA arrangements had been selected to satisfy certain common criteria that were essential to their being called exemplary. In addition, the three were selected to vary along certain dimensions, in order that a representative set of interorganizational arrangements could be studied. Thus, from the candidate list of fourteen REA arrangements (see Table 2-1), all of which had been deemed exemplary, three arrangements were selected:

- The Wayne County Intermediate School District (Wayne ISD) in Wayne, Michigan, linked with the Michigan Department of Education and serving the 36 school districts in Wayne County.
- The Northern Colorado Educational Board of Cooperative Services (NCEBOCS) in Longmont, Colorado, linked with the Colorado Department of Education and serving 6 school districts in the suburban area north and west of Denver; and

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*See Robert K. Yin, Margaret K. Gwaltney, and James Molitor, *Case Studies of Three Interorganizational Arrangements*, Abt Associates, Cambridge, Mass., 1981.

- The Educational Improvement Center-South (EIC-South) in Sewell, New Jersey, linked with the New Jersey Department of Education and serving 144 school districts in the southern portion of the state.

A description of each of these interorganizational arrangements follows and illustrates the characteristics of these arrangements that were important to their final selection.

Wayne ISD. The Wayne County Intermediate School District is located in the north central region of the country. The interorganizational arrangement of which the Wayne ISD is a part includes 36 local school districts, which together enroll over 465,000 students, the state department of education, and several universities in the area. With the collaboration of these other agencies, the Wayne ISD provides a variety of knowledge utilization services to the Detroit school district and other districts in Wayne County's suburban areas, including staff development, linker assistance, and information retrieval services, and has been doing so since 1962. Both general and special education topics are addressed. A number of positive outcomes are evident, including the development of numerous educational products, the offering of many in-service workshops, and the use of these services by a substantial number of individuals within the ISD's catchment area. Although the total Wayne ISD budget is quite large--$54 million--the bulk of these funds are state or federal pass-through dollars, which are eventually turned over to the LEAs for their funding of direct services, such as special education. (The ISD does provide some very specialized direct services, such as instruction for autistic children.) A large proportion of the services provided by the ISD itself are knowledge utilization services. However, these services are so well integrated with the other ISD services that no separate estimate of the budget support for knowledge utilization is possible.

NCEBOCS. The Northern Colorado Educational Board of Cooperative Services is located in the western region of the United States and serves suburban and rural school districts. Six local school districts, which enroll 83,000 students, have elected to be involved in the

interorganizational arrangement. In addition, the state department of education collaborates with the NCEBOCS through a liaison office. The relationship of the state department of education with the REA, however, is, in operation, primarily a cooperative (or voluntary) one. The services provided by the NCEBOCS, for example, are offered predominantly in response to the needs and demands of local school districts and not those of the state department of education. Furthermore, little funding support is given to the NCEBOCS from the state department.

The main support for the knowledge utilization services offered by the NCEBOCS comes from its member LEAs. Thus, the programs and services offered by the NCEBOCS are developed only after a local need has been determined and after financial commitment for these services has been secured from the member LEAs. This situation has led to declining utilization rates and contrasts to an earlier period in the NCEBOCS history when utilization of services was high. During the early 1970s, the NCEBOCS obtained several major awards from the federal government, and was larger and provided more services than it does now. (These contrasting historic periods will be discussed further in a later section.)

Currently, the services of the NCEBOCS are provided on a budget of $1.4 million, the bulk of which is received from local school districts. With these funds, several types of knowledge utilization services are provided. These include: staff development and inservice training workshops, information retrieval services, research and evaluation services, and linker assistance. Although the NCEBOCS provides a few direct services, such as cooperative purchasing and transportation services (the NCEBOCS provides no direct instructional services), the majority of its effort is directed to providing knowledge utilization services, which cover such topics as basic skills and migrant education.

EIC-South. The EIC-South is located in the eastern region of the country. Although only formally recognized by New Jersey state legislation in 1978, the EIC has been operating for over eleven years, originally with an ESEA Title III grant, and has been providing knowledge utilization services throughout that period, to school districts in a six-county region. One hundred forty-four urban, suburban, and

rural school districts are located within the region, and each collaborates with the EIC in identifying the types of services it needs. The LEAs pay no fees to receive services from the EIC.

In addition to the LEAs, the state department of education works closely with EIC-South, asking it to assist LEAs in implementing state priorities, such as the Thorough and Efficient (T&E) legislation, which requires under-performing LEAs to initiate remedial education programs (Haughey, 1979). The EIC-South operates under a budget of $3 million, a large portion of which comes from federal and state grant funds, and has a staff of approximately 75 FTEs. EIC-South provides only knowledge utilization services to school districts. These services include information retrieval services, inservice training and staff development workshops, and consultant, or linker, assistance. Topics such as gifted and talented education, basic skills, special education, and nutrition education are covered. In addition, various administrative requirements are addressed such as the evaluation of teachers and the setting of goals and objectives for meeting state and federal laws and regulations.

Summary of Services Provided

The three interorganizational arrangements were selected because they met the six previously stated criteria and were exemplary cases. Among these criteria was that the arrangement, at a minimum, offered three types of knowledge utilization services:

- *Staff development*, during which LEA personnel are brought together for workshops, conferences, and training sessions;
- *Linker assistance*, which involves an individual who acts as a linking agent and provides personal assistance relevant to a specific LEA problem; and
- *Information retrieval* (IR), which makes specific information available on a wide range of topics, based on requests made either in person or over the telephone.

Each of these three types of services involves a flow of information from one source to another. The information or knowledge that is

transmitted may be embodied in printed material, such as description of a new curriculum practice, or may involve face-to-face and verbal communications among different persons. For each type of service, however, the flow of information may be different.

Staff development programs, for example, usually involve face-to-face communications in which a single trainer or facilitator meets with a group of practitioners in a workshop setting. The workshops are often, but not always, operated at a common facility, where practitioners from different LEAs or schools can meet together. In contrast, a linking agent providing linker assistance usually works on specific problems identified by individual practitioners, and tends to give face-to-face assistance at the LEA or school site. Finally, an information retrieval facility is usually operated at some central location (typically, the REA itself), and the individual users must either visit the facility or make requests over the telephone. Such requests are usually satisfied by the transmission of specific reports or written materials.

The distinctions among these three categories of services, however, are not always this clear. The provision of linker assistance, for example, can also involve workshops for school building teams who will be involved in the implementation process. Conversely, some staff development programs can also provide linker-like assistance, with the trainer focusing on a specific school problem and thereby acting as a linking agent. Similarly, information retrieval services can involve personal interactions between the staff of the service and users, during which extended information, more like that found during linker assistance, may be transmitted.

In conducting the case studies, however, an attempt was made to distinguish among the three types of services, so that data could be collected on the operation of each type of service, thus enabling some comparison of the explanations for the success of the services across service categories and across cases. For each type of service, therefore, the flow of information from one source to another was traced, and the process by which the information was transferred was analyzed.

All knowledge utilization services or programs within each REA arrangement, however, were not studied. Rather, attention had to be limited to the single, best example of each type of service within each arrangement. The specific services that were studied are listed in Table 3-1, and the year in which the service began is indicated.

Outcomes of Selected Knowledge Utilization Services

In conducting the case studies, three types of outcomes were observed: (1) goods and services outcomes, (2) utilization outcomes, and (3) dysfunctional outcomes. All three types of outcomes are relevant to each of the three knowledge utilization services.

Goods and services outcomes refer to the written materials developed as part of each service, as well as any information that is given orally to service users. Utilization outcomes may be more complex, and may be either intermediate or ultimate. Intermediate utilization outcomes refer to the extent of use of the services--i.e., the number of participants or users that the services receive. Ultimate utilization outcomes refer to the actual utilization of the information that was given to users, and may include: the initiation of a planning or assessment activity; an actual change in educational practice; a change in perceptions or attitudes about the educational process that does not necessarily result in a changed practice; or confirmation that an existing practice need not be changed. Although both intermediate and ultimate utilization outcomes are relevant for the three knowledge utilization services, documentation of the latter type is not readily available, for at least two reasons. The first is that the utilization of information may occur some time after the information has been received by the user of the services. Therefore, any attempt to determine the extent of utilization is difficult. Thus, practitioners are often unable to associate specific pieces of knowledge with a change in practice or with a change in attitude. Moreover, practitioners are sometimes not even able to identify specific utilization occurrences, as utilization may actually involve a series of incremental steps (Weiss, 1980).

Table 3-1

START YEAR FOR SELECTED KNOWLEDGE UTILIZATION SERVICES

Type of Service	Regional Education Agency/Name of Service		
	WAYNE	NCEBOCS	EIC-S
Staff Development	Interinstitutional Workshops (1967)	Staff Development Program (1977)	Inservice Workshops (1969)
Linker Assistance	Project VALUE[a] (1974)	NDN Facilitator (1974)	Consultant Services (1968)
Information Retrieval	Project ASK[b] (1967)	Project ACCESS[c] (1970)	Information Retrieval Service (1967)

[a] This name was first used in 1976, but a similar service started in 1974 under the name Project INFORM.

[b] This name was first used in 1973, but the service started in 1967 under the name Project ASSIST.

[c] This name was first used in 1978, but the service started in 1970.

The third type of outcome--dysfunctional outcomes--refers to the problems that may result from interorganizational collaboration. These outcomes may be seen as the costs of collaboration. A description of the outcomes that were found for each of the case studies follows. For most of the outcomes, we present both the overall tabulations and illustrative vignettes.

Goods and Services Outcomes. Few numeric measures are available for these outcomes. In theory, the measurement unit would reflect some "bundle" of information transmitted--e.g., the number of reports distributed or curriculum offerings. Such measures are difficult to define precisely, however (e.g., what is a "report"?), and the following text mainly describes the types of goods and services that were found in each interorganizational arrangement.

These outcomes covered the type of information that was given to users and the manner in which this information was transmitted (see Table 3-2). The first of the three services--staff development services--included workshops, inservice training sessions, and courses for which graduate credit could be earned. The type of information given to participants depended on the topic of the workshop and the specific staff development program. The Interinstitutional Workshops in the Wayne ISD, for example, covered topics selected by the school or district teams that enrolled. Recent workshops have covered topics such as developing and implementing a model for institutional self-renewal, implementing changes in the organizational pattern of the school (e.g., open classrooms), and developing a guide for teaching educable, mentally handicapped students. Thus, the objective of the Interinstitutional Workshops has been to implement a new practice or product in the school building (see Vignette #1).

The staff development programs in the EIC-South and the NCEBOCS had purposes similar to those in the Wayne ISD, and, thus, similar kinds of information were involved. In each of the three programs, knowledge was transmitted to users through face-to-face communication and through written materials that were used during the workshop sessions. The NCEBOCS effort, in addition, involved a series of popular minicourses on classroom skills (see Vignette #2).

Table 3-2

GOODS AND SERVICES OUTCOMES
FOR SELECTED KNOWLEDGE UTILIZATION SERVICES

Type of Service	Regional Education Agency/Goods and Services Outcomes		
	WAYNE	NCEBOCS	EIC-S
Staff Development	o Workshop presentations, organized into semester-long courses	o Workshop presentations, organized into mini-courses (six weeks) or special sessions	o Workshop presentations, organized into special sessions
	o Training information and materials	o Training information and materials	o Training information and materials
Linker Assistance	o Phone and on-site advice and assistance about school problems, presented to school teams	o Phone and on-site assistance about school problems, presented to individuals and to school teams	o Phone and on-site assistance about school problems, mainly presented to individuals
	o Catalogs of educational products, including nationally and locally developed products	o Mainly NDN products	o Educational products
Information Retrieval	o Answers to telephone and in-person inquiries, based on: articles, research reports, curriculum guides, bibliographies, local documents and forms	o Answers to telephone and in-person inquiries, based on: journal articles, research reports, and bibliographies	o Answers to telephone and in-person inquiries, based on: journal articles, research reports, program and process models, educational product materials and curriculum guides

Vignette #1: STAFF DEVELOPMENT SERVICES (I)

A suburban high school enrolled in the Wayne ISD's Interinstitutional Workshops on four separate occasions. Each workshop focused on a different curriculum topic, chosen to suit the needs of the school staff (e.g., team teaching, home-school communications).

The Interinstitutional Workshops have been seen as an excellent device for improving teaching skills, for several reasons. First, the school and its staff are relatively young, and the teachers have been interested in expanding their knowledge of school practices. Second, the Workshops are one of the few activities that emphasizes a team approach, which is congenial with the staff's needs. Third, the credits obtained for attending the Workshops can lead not only to graduate degrees but also to direct salary increases, which are tied to the number of credits one may have beyond a B.A. degree.

Vignette #2: STAFF DEVELOPMENT SERVICES (II)

Since 1977, the NCEBOCS has offered four minicourses. Matriculation in these courses allows teachers to gain university credits from Colorado State University. The topics, taught by NCEBOCS staff, mainly have to do with classroom skills, such as helping elementary school teachers to get students to ask more effective questions.

An evaluation of the minicourse program for the most recently completed school year reported that the minicourses were well-received by most teachers. Frequent mention was made of the clear and well-organized presentation of practical teaching skills.

Similar types of information were provided in the second type of service--linker assistance. In all three case studies, the information covered educational products or processes. Project VALUE in the Wayne ISD, for example, provided teachers and administrators with assistance in using validated products in the school districts within Wayne County (see Vignette #3). The NDN facilitator project in the NCEBOCS had the same purpose, and in both cases the staff of the service acted as linking agents, assisting local practitioners in the definition of

Vignette #3: LINKER ASSISTANCE (I)

A Detroit middle school has operated as an "Alternate School" for 10 years. Students in the school are assigned to an academic team, according to their grade level, and receive instruction in language arts, social studies, and mathematics. Students also take three elective subjects, which change every 10 weeks.

The alternate school has been so popular that there are nearly ten new applicants for every vacancy, and the school has been visited on numerous occasions by staffs of other schools. The Wayne ISD linkage system (Project VALUE) has assisted in arranging for these visits. Project VALUE has also helped the school to adopt new curriculum practices, such as problem-solving instruction. The ISD helped the school obtain a Title IV-C adoption grant and assisted during a summer training session.

their particular need, the selection of a solution to meet that need, and the adoption and implementation of a product.

The Project VALUE staff also developed its own product catalogs, which listed educational products and programs that had been developed by districts within the state and the Wayne County region. The products contained in these catalogs had not been validated, but had been subjected to certain program eligibility criteria and thus passed specific standards of quality. In addition, the Project VALUE staff collected information about education programs from a variety of other sources, categorized them according to education topic, and included general information about them.

The consultant service in EIC-South also performed these functions. However, this service, similar to the staff development activities in the EIC, went beyond providing assistance on product implementation. EIC-South's consultants also provided more general information on the mandated responsibilities of local school districts under state and federal law. Whatever the situation, implementation assistance generally involved face-to-face communication. Information about particular products or answers to some questions were also given over the telephone. Nevertheless, the assistance was almost always provided to a specific individual rather than to a group (see Vignette #4).

Vignette #4: LINKER ASSISTANCE (II)

The superintendent of a southern New Jersey school district assumed the responsibility for evaluating the district's compliance with Section 504 of the Rehabilitation Act of 1973. Section 504 requires districts to conduct a self-evaluation, to assess the district's program accessibility, as well as the physical accessibility of its facilities, to handicapped students.

Initially, the superintendent was unclear about the scope of the regulation and therefore of the range of district programs that had to be included in the evaluation. The superintendent thus sought assistance from an EIC-South consultant who was knowledgeable about the federal requirement. The superintendent reviewed the district's programs with the consultant, and they discussed what should be included in the written evaluation, as well as the remedial action that the superintendent might take in order to put the district in full compliance with the law.

Unlike the first two services, the third--information retrieval services--primarily called for the dissemination of knowledge through written materials. In all three REA arrangements, the knowledge included extensive bibliographical information, information about educational products, journal articles, and other reference information available through various data commercial services such as DIALOG. In addition, the EIC-South provided practical materials--curriculum guides and educational products--that were directly applicable to classroom situations. Both the EIC-South and the Wayne ISD provided sample administrative forms as well, such as report cards, and these were given to users when requested.

Except for the EIC-South's information retrieval service, requests for information were generally made over the telephone rather than in-person. The requests were given to a member of the IR staff, the search for relevant information was conducted manually (using the IR files or other reference materials) or by computer, and the information was sent to the individual who made the original request. Material sent to users included copies of articles, reprints of educational products, or bibliographic lists of educational materials (see Vignette #5).

Vignette #5: INFORMATION RETRIEVAL

A Detroit high school began a reading lab that has gradually grown into a resource center. Students and teaching staff now use the lab to find information on a variety of topics, and not just to improve reading skills.

The director of the resource center has frequently requested information from the Wayne ISD (Project ASK). Recent materials sent from the ISD have covered consumer education and vocational education, and have been sought on behalf of teachers wanting to cover these topics in their classrooms. The resource center has become so popular that, on the day of our visit, it was moving to a much larger room in the school building.

The staff of each of the three services, in some cases, also developed new materials. Some staff in the EIC-South, for example, have been awarded federal grants for developmental projects. The products that are developed under the grants have been used by the staff in workshops and consultations.

Utilization Outcomes. As mentioned previously, two types of utilization outcomes were possible for each of the knowledge utilization services. The first were *intermediate* utilization outcomes and referred to the number of workshops or consultations that have been held and the number of requests for material from the information retrieval service that have been answered. In addition, the number of participants or users of the three services were also considered a measure of outcomes. Table 3-3 shows the level of use made of the services examined in each REA.

Substantial differences in the number of activities provided and the number of users for a specific service may be seen among the three interorganizational arrangements. In the case of the staff development services, these differences are ones of definition and design. For example, by definition, our study only focused on one staff development program in the Wayne ISD--the Interinstitutional Workshops. By design, the workshops tended to enroll no more than 12 individuals. Similarly, the offering of only ten to twelve workshops was purposeful; the objective of the workshops was to enroll school building or district

Table 3-3

INTERMEDIATE UTILIZATION OUTCOMES FOR SELECTED KNOWLEDGE UTILIZATION SERVICES

Type of Service	Regional Education Agency/Intermediate Utilization Outcomes					
	WAYNE		NCEBOCS		EIC-S	
	Number of Workshops, Consultations or Requests	Number of Users	Number of Workshops, Consultations or Requests	Number of Users	Number of Workshops, Consultations or Requests	Number of Users
Staff Development						
1978-79	19	143	4	111	299	39,000
1977-78	n.a.	109	n.a.	n.a.	473	16,274
Linker Assistance						
1978-79	2,957	n.a.	n.a.	n.a.	1,053	5,791
1977-78	n.a.	n.a.	n.a.	n.a.	853	15,461
Information Retrieval						
1978-79	1,470	1,470	206*	n.a.	9,055	9,055
1977-78	n.a.	n.a.	n.a.	n.a.	7,596	7,596

*1979-1980.
n.a. = not available.

teams who would be involved in the implementation of a new program, and therefore the enrollment of only the few key individuals in the implementation process was encouraged. The staff development programs in the EIC-South, on the other hand, varied in their purpose. Some workshops, for example, were intended to attract more than a hundred participants, and these workshops focused on such topics as the general requirements of the recent state law mandating the evaluation of all tenured teaching staff (see Vignette #6). Other differences in number of participants or users of the services were due to differences in the size of the student population served by the REA, external agencies that compete with the REA (e.g., the LEAs themselves in Northern Colorado), or differences inherent in the services themselves.

At the same time, the lower utilization levels for the NCEBOCS arrangement reflected a somewhat less than exemplary situation. In

Vignette #6: HOLDING A WORKSHOP

Staff of EIC-South have worked with individuals within each of the county offices to develop a workshop on tenured staff evaluation. The superintendent and a school board member from each district in the county, as well as every school principal and at least one teacher from each school, were required to attend the workshop. Thus, in one county, approximately 125 individuals participated.

The EIC provided assistance on all requirements of the state law, including the development of procedures for conducting the evaluation and the involvement of staff in this development process, the writing of job descriptions for district personnel, the observation of teachers in a classroom, the holding of a conference with the teacher following the evaluation, and the writing of an evaluation report. These workshops were held during the spring of 1980 and generally extended over several days.

both the staff development and information retrieval services, for instance, the lower levels were associated with the fact that the head of the service only worked on a part-time basis. The NCEBOCS has encountered a situation in which service utilization has been slowly

declining, and is now at a point that is too low to sustain a full-time activity; in turn, the part-time effort also has its own negative effect in that users may have no one to contact and are likely to use the service less in the future. In addition, the linker assistance activity that was studied, the NDN state facilitator project, served the entire state and not just the NCEBOCS area. In this sense, even this third service was not operating at a vigorous level, with regard to NCEBOCS member districts alone. In general, the utilization levels in NCEBOCS were surprisingly low, reflecting the possibility that its reputation as an exemplary site was based on an earlier period (early 1970s) of active federal awards.

Ultimate utilization outcomes refer to the actual uses that individual practitioners made of the information they received from an REA. Some data of this sort were recorded on evaluation forms that the staff of the services sent to users after a workshop or consultation had been completed or after an IR request had been met. However, no systematic follow-up to determine the extent of utilization in the district or school or the way in which the information had been used was made. Few data, in particular, were available on two sorts of utilization--i.e., confirmation that an existing practice need not be changed, and changes in attitudes or perception about the education process (see Vignette #7 for one example from our case study).

Vignette #7: ADOPTION OF A NEW PRACTICE (I)

A suburban elementary school teacher was interested in improving affective education. The principal contacted the Wayne ISD (Project VALUE) and over the following year the following activities took place. First, the Wayne ISD staff represented awareness sessions and helped the school team to apply for a Title IV-C adoption grant. Second, the teachers used these funds in part to travel to another school, to observe a specific approach to affective education in which they were interested. Third, the ISD staff helped with the local training and implementation activities, as a prelude to the new practice being used in the classroom.

Some anecdotal evidence of actual changes in practice was available for some services, however. The EIC-South, for example, provided assistance to districts on the implementation of the state mandate to evaluate tenured teachers. The EIC-South was able to document its impact by citing those districts in which a new process or practice had been adopted or an existing one had been modified. Similarly, Project VALUE in the Wayne ISD, and the NDN facilitator project in the NCEBOCS, collected data on the adoption of education products by its member LEAs. Table 3-4 shows the number of product adoptions that LEAs claim are a result of linker assistance. A typical adoption experience is described in Vignette #8.

> Vignette #8: ADOPTION OF A NEW PRACTICE (II)
>
> An elementary school in Colorado, with an active Title I program, sought assistance from the NDN facilitator in the NCEBOCS. The NDN staff helped the school to learn about and adopt a new remedial tutorial program.
>
> The facilitator provided funds for the school staff to visit another school where the program was being used, and to bring the developer in for training sessions. The adoption of the program allowed the school to double the number of Title I students that could be served.

Dysfunctional Outcomes. In addition to the outcomes just described, individuals and organizations that participate in knowledge utilization services may experience certain costs as a result of collaboration. These costs of collaboration may be called dysfunctional outcomes. All services in each of the REA arrangements were found to have some dysfunctional outcomes (see Table 3-5), and these are described below.

The Interinstitutional Workshops consisted of a series of 16 four-hour, once-a-week sessions. Because the purpose of the workshops is to assist educational practitioners in the adoption of a particular product, the sessions begin in the fall, thus allowing sufficient time during the rest of the school year to implement the product that was selected. However, the start of the workshops early in the year creates

Table 3-4

PRODUCT ADOPTIONS AS A RESULT OF LINKER ASSISTANCE, 1978-79

ADOPTION	REGIONAL EDUCATION AGENCY	
	WAYNE (Project VALUE)	NCEBOCS (NDN Facilitator)*
Number of Products Adopted	20	4
Number of Adoptions	49	3

*Number of adoptions by school districts in the NCEBOCS area. Statewide, the NDN facilitator has been involved in numerous other adoptions.

Table 3-5

DYSFUNCTIONAL OUTCOMES FOR SELECTED KNOWLEDGE UTILIZATION SERVICES

Type of Service	Regional Education Agency/Dysfunctional Outcomes		
	WAYNE	NCEBOCS	EIC-S
Staff Development	o Workshops must be planned in preceding school year	o Part-time staff reduces availability of service to users o Service provision is less stable because LEAs have alternative sources from which to seek assistance	o Service provision is less stable because LEAs have alternative sources from which to seek assistance
Linker Assistance	o Linkers assigned to schools and cannot specialize on specific educational topics, leading to information loss or causing users to contact different linkers		o Resource constraints create need for some group rather than individual consultations o Ambiguity of state mandates leads to difficulties in responding to users' needs
Information Retrieval	o Facility far away from some LEAs, reducing in-person use	o Facility far away from some LEAs o Part-time staff reduces availability of service to users o Geographic distances create delays in responding to requests o Delay created because users must submit requests to LEA administrator for approval	o Facility far away from some LEAs, reducing in-person use

problems as well. Because the workshops must be coordinated, the topics on which the workshop will focus must be selected during the spring semester of the preceding year, as must the individuals who will compose the workshop team. This can create false starts if conditions or personnel have changed from one school year to the next, requiring additional time in the fall to articulate the particular problem that the school team wishes to address. In principle, such dysfunctions might not occur if an interorganizational situation did not exist, because a school district might be able to schedule its own activities more quickly if it sponsored this kind of workshop.

Similarly, the staff development program of the NCEBOCS also exhibited some dysfunctional outcomes. One of these has been previously noted: The program was operated by part-time staff. Because the staff were not at the REA all of the time, their visibility to users was not high, and the staff were also not always available when users called with questions about the service or with specific requests for assistance.

In addition, other education agencies competed with the NCEBOCS in offering staff development services. One source of competition came from other BOCS in the state. Because the LEAs are only voluntarily members of a single BOCS and may also pay for services from other BOCS, an LEA may in fact select different services from different BOCS. Thus, within reasonable constraints of geography, all BOCS in Colorado compete with each other, and the service provision levels become less stable. A second and more important source of competition was the LEAs themselves. Instead of paying for the services of a BOCS, an LEA may decide to offer similar types of services on its own. Although one reason that such services are often provided by a regional agency is that the agency can take advantage of some economies of scale, the larger districts in Northern Colorado elected to provide some knowledge utilization services within their own district. This enabled them to support their own operations and to have more direct control over the services.

Similar competition existed for the staff development program of the EIC-South. Although the LEAs themselves were not competitive with the EIC-South (a membership fee is not paid by the LEAs in New Jersey,

and thus the LEAs have no incentive to operate the services on their own), a federally-funded teacher center, with its main office at Blassboro State College and satellite centers throughout the region, offer staff development workshops that overlapped those of EIC-South. Thus, for information on some general educational topics, teachers had a choice in deciding whether assistance should be requested from the EIC or from the teacher center.

Dysfunctional outcomes also were found for the linker assistance services. The linking agents on the Project VALUE staff, for example, did not specialize on a specific curriculum or administrative topic, but were assigned to work with particular LEAs, by geographic area. They therefore had to be able to provide assistance on any topic. The result was that all information regarding the educational topic for which assistance was requested could not be covered well, because the linker's main expertise was limited to a few topics. Although other consultants within the ISD had in-depth knowledge on the topic, and users could be referred to these individuals by the linkers, this sort of horizontal referral did not always occur and when it did, incurred additional burdens on the user.

The consulting assistance service in the EIC-South also had some dysfunctional outcomes. Because of resource constraints in terms of staff availability and funding, individual assistance could not always be provided. Therefore, beginning with the 1980-1981 school year, the consulting staff was providing some group consultations. These consultations were usually scheduled at the school site with a group of individuals--e.g., teachers of gifted students or kindergarten teachers--and common problems and possible solutions to these problems were discussed. Under the current arrangement, however, the consultant has been less able to address the specific classroom situation of the individual teacher.

A dysfunctional outcome for all three information retrieval services was the distance of the IR facility from some LEAs. Excessive distances alone prevented some users from visiting the REA. Although requests for information can always be made over the telephone, this

does not allow face-to-face interaction between the staff and the user, during which a request can be made more specific. Moreover, it does not provide the user with the opportunity to look independently through the IR files, nor does it give the user an opportunity to become acquainted with other knowledge utilization services provided by the REA that might be relevant.

The IR service in the NCEBOCS had three additional dysfunctional outcomes. First, the service, like the staff development service, was operated by a part-time project director. Thus, the same difficulties in getting information were exhibited in this case as were seen in the staff development service. Second, because information transmission involved three geographically distant points--the knowledge base located in the state department, the NCEBOCS, and the LEA--the time needed to receive the material that was requested was as long as ten working days. Immediate information needs therefore were not easily met.

A third cost of collaboration that was observed in the NCEBOCS was the bureaucratic process that users of the knowledge utilization services had to follow in order to have their requests for assistance met. For some LEAs, before a request for service was sent to the BOCS, the request had to be approved by a district administrator and, in some cases, by the building principal. The rationale for this process is the basic LEA autonomy in Colorado, leading to the desire of some LEA administrators to maintain full control over the activities of all staff, especially in their relationships with other organizations. However, this process discouraged some users from seeking assistance from the BOCS, not only because of the scrutiny that was applied to the individual request, but also because of the delays it caused.

Summary of Outcomes

Specific outcomes of the knowledge utilization services have been presented. The pattern of outcomes reflects the degree to which the interorganizational arrangements have been productively operating in our three case study sites. For most of the services, goods and services had been developed and provided for a period of years,

utilization rates and responses were positive, and dysfunctional outcomes were modest. To this extent, the data confirms the exemplary nature of the interorganizational arrangements.

This general observation, however, needs to be tempered by the evidence about the NCEBOCS. For all outcomes, the NCEBOCS appeared less successful than the Wayne ISD or EIC-South. Furthermore, the outcomes suggested that NCEBOCS may have entered a downward trend, especially because of the increasingly part-time nature of key staff assignments, as well as the declining support from the member LEAs. The following chapter therefore tries to analyze the reasons for the general outcomes and the distinctive situation in the NCEBOCS.

The success of the three interorganizational arrangements is not easily compared because of differences among the three in the way outcomes were measured. The three arrangements did show some variations in their degree of success. This variation exists, in part, as a result of the dysfunctional outcomes that were found. Thus, for example, the NCEBOCS appears less successful than the Wayne ISD and the EIC-South, because of the higher cost of collaboration exhibited by this arrangement. Nevertheless, each of the arrangements offers services that operate with sufficient intensity to allow explanations to be developed and tested for why the services operate as they do. These explanations will be discussed in Chapter Four.

Chapter Four

WHY KNOWLEDGE UTILIZATION OCCURS

A. FOCUSING ON THE ROLE OF INTERORGANIZATIONAL ARRANGEMENTS

Types of Explanations

The preceding chapter has described the outcomes for three different types of knowledge utilization services, each in three case studies. Why these services have been able to operate is the topic of the remainder of this report.

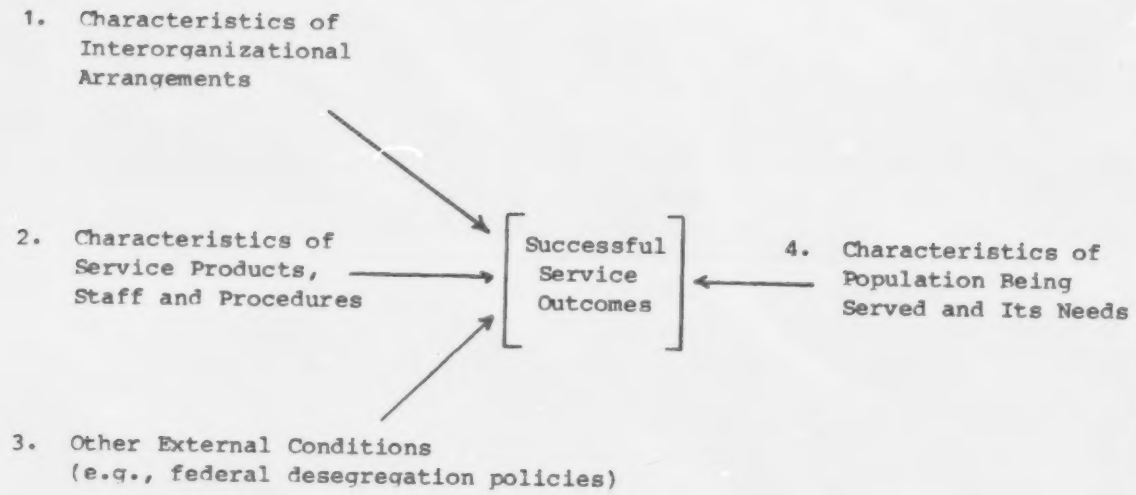
Our analysis focuses especially on one, and not necessarily all of the types of explanations for successful services. These are the explanations specifically related to *interorganizational arrangements*. Thus, whereas successful services may be a function of at least four types of explanations (see Figure 4-1), our inquiry attempts mainly to delineate the interorganizational ones, and to refer only in passing to the other three types.

This limitation was imposed by design, for several reasons. First, interorganizational arrangements are a common way in which knowledge utilization services have been implemented in education. Second, the salient characteristics of these arrangements have been underinvestigated. Third, the importance of other facets of the knowledge utilization process (e.g., the need for high-quality service products, efficient communications links, and staffs skilled in the relevant educational fields) has been covered more fully by previous research and is not necessarily peculiar to interorganizational situations. Fourth, the current study deliberately began with the interorganizational issue, and the main concepts and evidence deal primarily with knowledge utilization from this viewpoint.

At the same time, the implications of this focus should not be misinterpreted. Our objective is *not* to compare interorganizational with other types of explanations. We regard our task simply to be the elucidation of the interorganizational explanations, because of their relevance to policy as well as theory.

Figure 4-1

CONDITIONS RELEVANT TO SUCCESSFUL KNOWLEDGE UTILIZATION SERVICES


1. Characteristics of Interorganizational Arrangements
2. Characteristics of Service Products, Staff and Procedures
Successful Service Outcomes
4. Characteristics of Population Being Served and Its Needs
3. Other External Conditions (e.g., federal desegregation policies)

Simple versus Complex Arrangements

The following sections perform this task by presenting a series of explanations--when the interorganizational arrangements are *simple* and when they are *complex*. Simple arrangements mainly involve knowledge utilization functions, whereas complex arrangements involve these as well as intergovernmental functions. The distinction between these two types of arrangements, as described below, may be considered a major finding of our study. We had not made this distinction in the initial design of the study, yet the case study evidence was clarified once the distinction was made. For this reason, our analysis of the cross-case evidence is divided into these two different situations.

In each of the following sections, the general nature of the simple or complex arrangement is first depicted, and the evidence from the three case studies is then used to explain how the arrangements work best to produce knowledge utilization.

B. EXPLAINING SIMPLE INTERORGANIZATIONAL ARRANGEMENTS

The initial reason for selecting regional education agencies (REAs) was not to do case studies of these agencies alone. Rather, the case studies were designed as case studies of three interorganizational arrangements, with the REA being the center of the arrangement, but with at least two other types of organizations involved in the knowledge utilization process: state departments of education (SEAs) and local school districts (LEAs). Our study began with only a vague rendition of the interorganizational arrangement among these three types of organizations, shown previously in Chapter Two (see Figure 2-1). The REA was considered an intermediary, receiving mandates and resources from both an SEA and a set of LEAs, and providing specific services in return. Moreover, the entire arrangement was initially seen in a unitary manner. However, the case studies strongly suggested that there was a qualitative difference in the relationships between REA and LEA (simple arrangement) and some of the relationships between SEA and both REA and LEA (complex arrangement). This realization then produced a clearer portrayal of the entire SEA-REA-LEA arrangement.

Basic Functions in Simple Arrangements

The first important insight was that, underlying the simple arrangement were two basic functions critical to the knowledge utilization process:

- The development and maintenance of a knowledge base (i.e., the collection of appropriate information on an educational topic); and
- The application of this information in a practice-setting (whether resulting in a changed practice, in comfirmation of the soundness of an existing practice, in a changed attitude, or in planning).

In principle, *simple interorganizational arrangements* can exist between any number of organizations, as long as some organizations produce or maintain a knowledge base and the other organizations apply the information in a practice-setting. Our findings may therefore be pertinent to this broader situation, regardless of the specific identities of the participating organizations.

For the specific interorganizational arrangements that were studied, any of the three major types of organizations (SEA, REA, and LEA) might have performed, to varying degrees, one of the two functions. In the most extreme situation, both the maintenance of a knowledge base and the application in a practice-setting may occur on a completely intra-organizational basis. For instance, the Wayne County ISD operates classroom services in special education, on behalf of its constituent school districts; in this situation, the REA simultaneously performs both of the critical knowledge utilization functions. Similarly, several of the larger LEAs served by the Northern Colorado BOCS have their own curriculum development and supporting staffs; in these situations, the LEAs are the ones that simultaneously perform both knowledge utilization functions.

The situations relevant to the present study, however, were the ones in which at least two *different* organizations performed these two functions, and in which an REA was one of the organizations. Given these two conditions, three alternative arrangements are possible and

are shown in Figure 4-2. The variations stem from the fact that the SEA may or may not participate in maintaining the knowledge base, and the REA may alternatingly perform either of the two functions, depending on the service (the situation in which the REA performs both functions simultaneously was ignored, as it represents the intra-organizational situation). Of these three alternatives, our case studies contained examples of arrangements (1) and (3).

When two different organizations attempt to collaborate in performing these basic knowledge utilization functions, what are the processes that determine a productive relationship? Earlier, our study postulated several possible explanations, based on interorganizational and interpersonal consideration.* These explanations are now discussed, in light of the findings from the three case studies.

Why Simple Arrangements Work

Of the five interorganizational explanations that were initially entertained, the evidence from the case studies showed that simple arrangements mainly work because the collaborating organizations: (a) derive increased access to external resources, (b) share some mutual exchanges, and (c) respond to mandates to collaborate. Not as important were two other potential explanations: that the collaborating organizations operate either as a result of formal agreements or because of conflict mediation. At the interpersonal level, the case studies suggested the importance of an explanation not previously identified: that an elaborate network of continuing communications strongly facilitates knowledge utilization. All of these explanations are discussed below.

Deriving Increased Access to External Resources. The importance of this explanation was not evident in the initial interpretations of the individual case studies. The case studies gave greater emphasis to the role of mutual exchanges, but in retrospect confused two situations: where exchanges were based solely on resources provided by the participating organizations (REA and LEAs), and where exchanges

*See Chapter Two, section on "Explanations for Successful Interorganizational Arrangements."

Figure 4-2

DOMINANT INTERORGANIZATIONAL ARRANGEMENTS FOR PERFORMING BASIC FUNCTIONS IN KNOWLEDGE UTILIZATION

KNOWLEDGE UTILIZATION FUNCTION	PARTICIPATING ORGANIZATIONS		
	Dual Knowledge Base	Dual Practice Setting	Single Knowledge Base and Practice Setting
	(1)	(2)	(3)
DEVELOPMENT AND MAINTENANCE OF KNOWLEDGE BASE	State Department of Education	State Department of Education	
	Regional Education Agency		Regional Education Agency
APPLICATION IN PRACTICE-SETTING		Regional Education Agency	
	LEAs	LEAs	LEAs

actually involved resources from a third party (SEAs and federal agencies). A re-examination of all three case studies showed that the presence of third-party resources was, in fact, the more common situation. Thus, a reinterpretation of the case study evidence emerged in the following manner.

An examination of the overall budget for each of the REAs, as well as of the sources of support for specific knowledge utilization activities, initially suggested the possible importance of external resources. The ensuing conclusion was that interorganizational collaboration can be best fostered if, as a result of the collaboration, the participating organizations can gain additional resources from an external source. This situation should be directly contrasted with an arrangement whereby users' fees are used to support a service. Based on our three cases, the latter situation does not seem to work as effectively. Let us examine why.

The most common pattern is summarized by reviewing the entire array of REA revenues (see Table 4-1). Among the three REAs, the more productive ones (the Wayne ISD and EIC-South) have revenue patterns that are heavily dominated by external sources of funds--from state and federal agencies. The Wayne ISD, in addition, has a direct taxing authority through which it derives substantial funds. Conspicuous by their absence in both of these cases are any significant funds from the member LEAs, which appear in contrast in two places in the less exemplary arrangement (involving the NCEBOCS)--contributions to the general fund and fees for specific services, which total over 40 percent of that REA's revenue. Although we will later indicate some important instances in which mutual exchanges between an REA and its LEAs are made, the overall revenue pattern strongly suggests that mutual exchanges, in terms of one organization (e.g., an LEA) compensating another organization (e.g., an REA) for its services, cannot be the dominant explanation for productive service operations in our three cases.

This same pattern is evident for specific knowledge utilization services (see Table 4-2). Each of the three case studies had in turn focused on three such services, generically identified as staff

Table 4-1

SOURCES OF REVENUE
FOR ENTIRE REGIONAL EDUCATION AGENCY

Type of Revenue	Regional Education Agency					
	WAYNE (1980-1981 est.)		NCEBOCS (1979 est.)		EIC-S (1980 est.)	
	$ 000	%	$ 000	%	$ 000	%
GENERAL FUNDS						
Direct Local Taxes	853	1.8	--	-	--	-
Contributions by Member LEAs	--	-	166	15.2	--	-
State Aid	3,220	6.7	10	0.9	605	20.1
Other (debt and retirement funds, private sources, etc.)	2,974	6.2	134	12.3	--	-
SPECIAL AREAS						
Special Ed. Mill	17,947	37.1	--	-	--	-
Service Fees from Other Jurisdictions	--	-	76	7.0	--	-
Service Fees from Member LEAs	2,008	4.2	287	26.3	--	-
State Projects	2,273	4.7	286	26.2	435	14.5
Federal Projects	19,079	39.5	134	12.3	1,969	65.5
TOTAL	48,354	100.0	1,093	100.0	3,009	100.0

Table 4-2

SOURCES OF SUPPORT
FOR SELECTED KNOWLEDGE UTILIZATION SERVICES

Type of Service	Regional Education Agency		
	WAYNE	NCEBOCS	EIC-S
Staff Development	Interinstitutional Workshops: Participants' fees, with some core support[a]	Staff Development, Program: Core support	Staff Development: Variety of federal funds, including Title IV-C, Title VI, etc.
Linker Assistance	Project VALUE: Federal Title IV-C funds and core support	NDN State Facilitator: Federal NDN funds, with IV-C funds also used through 1978	Consultant Services: Variety of federal funds, including Title IV-C, Title VI, etc.
Information Retrieval	Project ASK: Federal Title IV-B funds and core support	Project ACCESS: Federal funds (NIE state capacity-building grant)	Information Retrieval Service: Federal Title III and Title IV-C funds (1967-1979) and core support (1980-1981)

[a] Core support refers to REA general funds.

development, linker assistance, and information retrieval. In seven of these nine instances (the exceptions being the Wayne ISD Inter-institutional Workshops and the NCEBOCS staff development service), the bulk of support comes specifically from some state or federal program, usually on the basis of an application submitted by the REA, and an award made by a state or federal agency; in short, the knowledge-users (LEAs) receive most or all of the services at no cost.*

Three specific situations, each involving one of the three REAs, give further evidence for this overall interpretation.

First, *the NCEBOCS arrangement* is based primarily on the philosophy that the member LEAs should provide most of the support for the NCEBOCS's services--and that, conversely, this "accountability" to the knowledge-user will assure that the NCEBOCS will design and implement services directly responsive to users' needs. (The pursuit of this policy accounts for the higher proportion of revenues from member LEAs in the NCEBOCS budget.) Such an arrangement is less tenable when, as in Colorado, the more richly-endowed LEAs can provide such services for themselves. Thus, it is not surprising that the member LEAs of the NCEBOCS have their own knowledge utilization services (e.g., in staff development), can develop new services of their own even if the ideas for them originated in the NCEBOCS, or have withdrawn support for the NCEBOCS entirely. All of these phenomena were found in our case study. The traditional counter-argument would be that an REA should, in operating a knowledge base, achieve some economies of scale and a higher quality of service and thus provide a cheaper or better service than an LEA could for itself. This counter-argument is partially irrelevant to Colorado, however, where the geographic distances covered by the NCEBOCS service area are so great as to preclude any economies of scale in knowledge utilization, because

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*Not shown on the table is that the REAs (particularly the Wayne ISD) have been careful not to compete with their member LEAs in applying for such funds. Thus, the REAs have tried to identify state or federal programs for which LEAs are ineligible, uninterested, or cannot be competitive. In this sense, the REA-LEA collaboration produces more benefits for both organizations.

face-to-face contact or access to the files is often needed but uneconomic. For the more general situation, the main point is that in simple interorganizational arrangements, fees for services will probably only work where one of the participating organizations offers a service that the other is incapable of providing for itself.

In contrast, the NCEBOCS was larger and perhaps more productive in providing knowledge utilization services at an earlier period in its history. During the early 1970s, the NCEBOCS obtained several major federal wards, and the relationships with the member LEAs probably were stronger. In recent years, the NCEBOCS has had to rely more on funds from the member LEAs, and it is in this circumstance that collaborative relationships have weakened.

Second, *the EIC-South*, prior to state legislation in 1978, was not eligible to be a fiscal agent in receiving state and federal funds. For ten years (1968-1978), all of the EIC's funds had to pass through a member LEA (which served as the fiscal agent). During these years, the EIC-South nevertheless developed numerous collaborative proposals with its member LEAs, it initiated many knowledge utilization services, and it grew from a two-person to a sizable operation. As a result, the success in obtaining external funds further strengthened the collaborative arrangement between the REA and LEAs. Thus, in contrast to the NCEBOCS situation, a strong, interdependent relationship was developed between the EIC-South and its member LEAs. Furthermore, this relationship was fostered in the absence of users' fees provided by the member LEAs.

The third situation involves *the Wayne ISD arrangement* and is only indirectly related to knowledge utilization, but still appears to affect the basic interorganizational relationship between an REA and its LEAs. This is the situation with special education (classroom) services, where a special millage was passed to support these services. None of the member LEAs could have initiated or organized these services alone, leaving the ISD in a preeminent position to take advantage of the millage. In turn, the ISD has, over the last few years, gradually passed much of this additional resource to the direct use of the member LEAs, by arranging for the LEAs to substitute for the ISD in operating

specific special education services; the ISD, however, still performs the needed coordinating role and still operates the few services for which no member LEAs are available. Overall, benefits gained from these external resources have led to a collaborative interorganizational relationship that reinforces the spirit of collaboration with regard to knowledge utilization services. An important supposition is that, in general, non-knowledge utilization services may be important facilitators of knowledge utilization services.*

One further point deserves mention. The same pattern of external support can be found for the other knowledge utilization services that are provided by the three REAs, but which did not happen to be the main topic of any of the case studies (see Table 4-3). Federal and state funds are again prominent as sources of support, together with a general absence of activities supported solely by funds from member LEAs. The evidence from these activities shows that our basic interpretation about the importance of external sources is not limited to the nine knowledge utilization services that happened to be included in the case studies.

Establishing Mutual Exchanges. The individual case studies also showed some instances where mutual exchanges--i.e., where the participating organizations derive specific benefits from each other--also accounted for fruitful collaborations. However, the mutual exchange explanation--where resources do not come from a third party--must be considered of secondary importance in comparison to the role played by gaining access to external resources.

The best examples of such mutual exchanges were found with two types of services: staff development and linker assistance. With

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*In its strongest form, the claim would be that knowledge utilization services may be difficult to sustain on their own; a permanent collaborative arrangement cannot be developed between two organizations solely on the basis of the provision of knowledge utilization services. This observation is most pertinent for EIC-South. In New Jersey, the EICs are limited to knowledge utilization services; other administrative and instructional services, at the regional level, are provided by nine Educational Service Commissions (ESCs). The case study indicated that the overlap between the EICs and ESCs has been continually questioned, and that some type of merger may provide a more stable long-term arrangement. Should events move in this direction, they would begin to support our suggestion about the long-term difficulties of a knowledge utilization-only organization. Further research, however, needs to be done on this topic.

Table 4-3

SOURCES OF SUPPORT
FOR RELATED KNOWLEDGE UTILIZATION ACTIVITIES

Type of Service	Regional Education Agency		
	WAYNE	NCEBOCS	EIC-S
General Reproduction and Media Services	Regional Educational Media Center: State aid and federal Title IV-B funds		
Additional Linker Assistance Services	General Education Consultants: core support;[a] Regional Supplemental Center: Federal NDN funds		
Curriculum Specific	Special Education: Special mill and federal funds; Career Education: state funds; Numerous federally-funded projects	Migrant Education Resource Center: state funds	Nutrition Education Program; Gifted and Talented: state funds

staff development, both the Wayne ISD's Interinstitutional Workshops and the NCEBOCS's staff development program involved three participating organizations: the REA, the member LEAs, and a local university. (Although three organizations are involved, the situation still falls within our definition of simple interorganizational arrangements, because the main functions are limited to the maintenance of a knowledge base and the application in a practice-setting.) The case studies indicated how specific benefits were derived by all three organizations, with the LEA participants paying fees for taking courses for credit; the universities providing instructors and course credit in return for increased enrollments in their programs; and the REAs directing the design of the courses and curriculum in return for administering and arranging the program. Because of these mutual exchanges, the services have not required extensive funding support and yet have been designed to meet the needs of school personnel in dealing with their practical educational problems. At the same time, evidence of the potential vulnerability of these relationships was also noted in the case studies. As school staffs become older because of their lack of growth (due to declining enrollments), fewer administrators and teachers will be interested in gaining university credits, and the staff development programs will have to be redesigned, if possible, to continue the mutual exchanges.

With linker assistance, the mutual exchanges revolved around the REA, the member LEAs, and the state department of education (SEA). The case studies again covered the basic exchange of benefits among these organizations. The LEAs collaborated with the REA in implementing new educational practices, in return for which assistance was received in developing applications for adoption grants under the federal Title IV-C program, administered by the SEA. The SEA reviewed the applications and allocated funds, with greater assurance that good results would be achieved, because the LEA was working in collaboration with knowledgeable REA staff (LEAs may also apply directly to the SEA for adoption grants). The REA was able to assist LEAs in implementing a new practice, using the possibility of obtaining an adoption award as an added incentive to the LEA, and gained further contacts and

credibility for its services. This set of mutual exchanges was found in both the Wayne ISD and NCEBOCS, with Project VALUE and with the NDN State Facilitator Program.

Overall, however, mutual exchanges were not so prevalent that they alone could explain knowledge utilization in simple interorganizational arrangements.* The exchange relationships are helpful supplements but, as far as the evidence from the three case studies is concerned, do not serve as substitutes for the access to external resources.

Responding to Mandates to Collaborate. A third important explanation for productive interorganizational arrangements was the basic structure of the collaborative mandate. The three case studies had been selected initially to reflect differences in legal settings--i.e., whether LEA participation in REA arrangements was mandatory or voluntary (see Chapter Two). Thus, the legislation in each state formalized the structural arrangement between the REA and the LEAs.

For two of our case studies (Wayne ISD and EIC-South), all LEAs are assigned, throughout the state, to a catchment area served by one of the REAs in the state, and the LEAs may then seek assistance from the REA according to their needs. In contrast, in the third case study (NCEBOCS), the LEAs are not assigned to an REA, nor is the establishment of an REA for every catchment area mandated. Instead, LEAs are authorized by state legislation to establish an REA if local demand suggests the need for it. Although the state department provides a small amount of funds to each of the BOCS in Colorado, the bulk of the support has to come from LEA membership contributions and from individual state and federal awards.

The difference between the mandatory nature of the arrangements in Michigan and New Jersey and the permissive nature in Colorado appear important in the following manner. Because of the state's more central role in the structure of the interorganizational arrangement in Michigan and New Jersey, the state department has more of an interest

*Compare this to the discussion of mutual exchange in complex interorganizational arrangements.

in the success of the arrangement than it does in Colorado. In New Jersey, the state's interest is especially exercised during the annual review of the EICs' budgets, which are a line item in the state budget; in Michigan, the state continually relies on the ISDs to administer state-mandated services (e.g., career education). As a result, the REAs feel a continued obligation to serve their LEAs well. In contrast, the state department assumes a laissez-faire policy in Colorado, with little desire to influence REA-LEA relationships or even to assure the survival of any particular REA.

From an LEA perspective, the differential effect of the legal mandates is even more clearly evident. The LEA members of EIC-South and of the Wayne ISD look to the REAs for assistance. If new problems arise, the REA is assumed to be a potentially useful resource. In contrast, the NCEBOCS appears more frequently to be put into a position of imposing its services on its member LEAs; the LEAs do not appear to consider the REA a prominent source of assistance. Thus, the information retrieval staff of one member LEA, geographically only a few miles away from the NCEBOCS, has rarely if ever visited the REA to use its facilities.

All other things being equal, a strong mandate can strengthen a collaborative relationship. A weak mandate may undermine such a relationship.

Complying with Formal Agreements. Less useful as an explanation for successful knowledge utilization was the role of formal agreements between the REAs and the LEAs. Such agreements, it was hypothesized at the outset, might be an important force behind interorganizational collaboration. The basic finding, however, was that few such agreements existed. Formally, each of the participating organizations (REA and LEAs) did have a legislative and legal mandate, just described, to conduct certain activities. But these mandates did not constitute agreements between the collaborating organizations.

For the individual knowledge utilization services that were studied, the existence of only a few agreements was found, and none of these was related to the essential aspects of the service. For instance, the Wayne ISD had an agreement to use space in a university

facility, as part of Project ASK. Other examples were the adoption grants made in conjunction with the linker assistance services--but these grants were only part of the entire services. A final set of examples consisted of other project-specific contracts, where the REA had received an award from a state or federal agency to perform a particular service (e.g., see Table 4-3). Yet, these agreements were between a funding source and a service provider, and not a collaborative arrangement between a service provider and user.

A more important observation is that several of the knowledge utilization services, even where they involved several organizations, did not have any formal agreements. Among the most notable examples, the staff development activities in the Wayne ISD and NCEBOCS arrangements operated without any formal agreements (or even written understandings) among the REA, the LEAs, and the universities. To this extent, the collaborative arrangements have not been formalized and operate satisfactorily in the absence of such formalization. In the long run, such arrangements may be vulnerable to dissolution should certain key personnel depart, and for this reason the promulgation of formal service agreements may be desired in the future. The point here, however, is that such agreements cannot be used as an explanation for the knowledge utilization that has already occurred.

Mediating Potential Conflicts. No evidence was found of the role of conflict-reduction or conflict-resolution as an explanation for interorganizational collaboration. One possibility is that this explanation may be relevant to certain types of simple interorganizational arrangements, but not those concerning knowledge utilization. For knowledge utilization, future consideration of this explanation is probably unnecessary.

Establishing Knowledge Utilization Networks. A final explanation was not explicitly considered at the outset of our study, but incorporates elements of the key explanations at the interpersonal level.

The basic phenomenon has to do with a view of knowledge utilization as a *continuous*, rather than *discrete* process. Heretofore, the interorganizational relationships have been implicitly regarded in a discrete fashion: One organization develops specific pieces of

information and communicates it to users, and users put the information into practice. Although complexities arise when the appropriate feed-forward and feedback loops are added, these do not change the image of knowledge utilization as an essentially discrete activity.

In contrast, the findings from the three case studies all supported a broader notion of knowledge utilization, covering it as a discrete activity, but going further. Continued interpersonal communications between REA and LEA staffs is needed to lead to:

- Increased awareness of the capabilities and needs of each party;
- Individualized contacts between staff members, independent of the occasions when a specific problem needs to be solved;
- An appreciation of the organizational, political, and resource constraints that might exist more generally between two organization;
- An ability on the part of users to learn about the information resources for each of the services and subsequently to use these resources and services more effectively; and
- Identification of potential future needs or capabilities.

In short, the continual communications serves the purpose of allowing each organization to "know" about the other; the general knowledge then becomes a more solid foundation for increasing the success of the discrete knowledge utilization activities. The phenomenon appears to be similar to the establishment of a social network.

Among the three case studies, specific activities helped to build and maintain this network. First, each REA has a governing board that is either limited to the superintendents of the member LEAs or dominated by them. The entire range of REA activities, in effect, is constantly reviewed by the REA's clientele group. The boards meet monthly, review and approve the REA's budget, and discuss proposed REA activities. Because the boards represent the parties involved in both

knowledge utilization functions--maintenance of the knowledge base and application in a practice-setting--the activities of the boards serve an essential though indirect knowledge utilization purpose.

Second, staff members of the REAs maintain a whole host of professional communications in relation to the staffs of the member LEAs. These communications are not formally organized in any fashion. In the Wayne ISD arrangement, staff members are especially active in participating in state and local professional groups, such as associations of principals, teachers, or curriculum specialists. As noted in the Wayne ISD case study, the staff members often maintain contact with a general category of users (e.g., principals) that reflects the staff member's own profession and prior position, and that is not necessarily related directly to the staff member's current REA position. As another example of this informal networking at the interpersonal level, the curriculum consultants in EIC-South attend the "exit" conferences held at LEAs in conjunction with their state assessments. Though the EIC-South staff person has no specific responsibility with regard to these conferences, attendance is another means of learning about the LEA's potential needs for knowledge utilization services.

Third, the case studies revealed an important career development pattern that also added to the network: Where knowledge utilization occurred in its most intense and successful form, the relevant staff members were likely to have served, in a prior position, in one of the member LEAs. This prior position had provided the REA staff person with an initial set of contacts and a basic understanding of the needs for service from the LEA (or user) perspective. Moreover, the career mobility from LEA to REA was clearly a result of differential salaries and professional statuses. In the Wayne ISD arrangement, for instance, movement from LEA to the ISD could be considered a "promotion" in one's career, because the responsibilities were broader and the salaries higher.* Conversely, the NCEBOCS has had continued difficulty in

*This is not to say such a promotion was necessarily more preferred than other promotions (usually within the LEA). The differential salaries just mean that some LEA persons can take the opportunity to transfer to the REA.

recruiting new staff persons from the member LEAs, partly because the NCEBOCS's salaries are distinctly lower than those of comparable positions in the member LEAs. (A similar problem is now emerging in the Wayne ISD, where the earlier salary differentials have begun to be reversed because of rapid salary increases among LEA personnel.) In such a situation, the reverse career pattern was more likely to occur. The NCEBOCS could recruit a new staff member, usually from another BOCS either within or outside of Colorado, who after a period of time could become eligible for a more attractive position in a member LEA. In this reversal, the benefits of network-building were likely to become minimal; at the new LEA position, the staff member represented but one of many users rather than being in a more central, coordinative role.

Fourth, successful interpersonal communications requires not only the appropriate flow of persons from one organization to another, but also a certain longevity of service. Where job turnover is high, individuals automatically lose contact with each other, and the network is disrupted. For the three REA arrangements that were studied, Table 4-4 lists the length of tenure for the key supervisors in relation to the knowledge utilization services that were studied. (The table also indicates those instances where the supervisor held a prior position in a member LEA.) The table shows that the length of tenure for most of these incumbents has been reasonably long. Moreover, the shorter tenures occur in NCEBOCS, where the knowledge utilization services have been the least productive among the three case studies.

It is difficult to establish any direct ties between the interpersonal networks and the successful operation of knowledge utilization services. What the case studies revealed, however, was that REA-LEA communications led each party to be more familiar with the needs and situation of the other party, in a general way. More important, the communications led to acquaintance with specific persons in the other organization. All of this appeared to enhance the effective design and implementation of specific knowledge utilization activities.

Table 4-4

YEARS IN PRESENT POSITION FOR SELECTED STAFF PERSONNEL, AS OF 1980

Type of Activity	Regional Education Agency/Position Title		
	WAYNE	NCEBOCS	EIC-S
DIRECTOR OF REA	Superintendent (6 years; prior position in member LEA); Deputy Superintendent, (25 years)	Executive Director (3 years)	Executive Director (12 years, with 3-1/2 years in between at state department); Deputy Director (10 years)
STAFF DEVELOPMENT	Director, Interinstitutional Workshops (13 years; prior position in member LEA)	Director, Staff Development (2 years)	(service is supervised by Executive Director)
LINKER ASSISTANCE	Director of Information Services (7 years; prior position in member LEA)	Director, Colorado State Facilitator (6 years)	(service is supervised by Executive Director)
INFORMATION RETRIEVAL	Director, Project ASK (7 years)	Director of Information Services (10 years; prior position in member LEA)	Director of Information Retrieval Service (13 years)

Service-Specific Conditions Leading to Knowledge Utilization

The preceding section has identified the major *interorganizational* explanations for the success of simple arrangements. As indicated earlier, the quest for these explanations has been considered the primary objective of our study, and the text has shown how four explanations appear to be most important: increased access to external resources, mutual exchanges, mandates to collaborate, and network-building. All other conditions being equal, our conclusion would be that the success of simply interorganizational arrangements can best be explained by these four conditions.

However, the evidence from the case studies also revealed another set of conditions which, although not strictly related to interorganizational matters, were important enough to warrant mention. These conditions are related to the design and implementation of specific knowledge utilization services; the conditions themselves need to be satisfied even when the same organization performs both knowledge utilization functions: maintenance of this knowledge base and application in a practice-setting. In this sense, the conditions may be *intra-* or interorganizational and do not bear directly on the major topic of our study. Nevertheless, the findings are worth reviewing, to serve as clues for designing any future knowledge utilization services.

Each of the case studies showed that the services were largely successful because they had incorporated a strong *user-responsive orientation*. This orientation was a result of numerous steps taken to understand user needs and to integrate these needs into service operations. Table 4-5 enumerates the specific steps that were taken in this regard. The table deliberately emphasizes those user-oriented steps that go beyond those commonly found in most knowledge utilization services; thus, the table ignores the awareness, outreach, and linking activities that have become a standard part of the NDN state facilitator programs, for example, across the country.

What was found in the three REAs was a variety of functions that went beyond these standard activities. Examples of six types of functions were documented by the case studies:

- Assessment of user needs;
- User participation in the design of a knowledge utilization service;
- User sensitivity in the design of everyday service operations;
- Development of a user-oriented knowledge base;
- User-oriented ways of providing implementation assistance; and
- Follow-up procedures for assessing user satisfaction with services.

In the aggregate, the specific activities undertaken as shown in Table 4-5, helped to assure successful knowledge utilization. These conditions cannot be overlooked in explaining why knowledge utilization occurs, and the REAs appeared quite sensitive to their importance. To this extent, these user-oriented functions, and the steps that can be taken to fulfill each function, should serve as a basic reminder for the future.

In contrast, certain other service conditions were found to be less important, at least in our three case studies. These included three of the four conditions whereby the cases were selected in the first place: variations in service to urban, suburban, and rural districts; regional location in the country; and size of REA budget and service areas.* The REAs were quite adaptive to variations in these conditions; where some differences at first appeared important--e.g., regional location--these were actually attributable to other conditions such as the differences in collaborative mandates.

C. EXPLAINING COMPLEX INTERORGANIZATIONAL ARRANGEMENTS

Distinguishing Complex from Simple Arrangements

Complex arrangements exist among organizations when their functional relationships include but go beyond the two basic knowledge

*See Chapter Two, section on "Final Selection of REA-LEA Arrangements."

Table 4-5

RANGE OF USER-ORIENTED FUNCTIONS PERFORMED
IN RELATION TO KNOWLEDGE UTILIZATION SERVICES

	Regional Education Agency/Illustrative Activities		
Type of Activity	WAYNE	MCEBOCS	EIC-S
ASSESSMENT OF USER NEEDS	• 1978 Survey of Teachers and Administrators • Annual Survey of Superintendents	• Considering a needs assessment for Staff Development Program	• Annual needs assessment of teachers and administrators
USER PARTICIPATION IN DESIGN OF SERVICES	• LEA personnel participated in initial design of Project VALUE • Participants determine curriculum for Interinstitutional Workshops	• Participants determine selection of staff development mini-courses	• Topics of Inservice Workshops are selected to meet users' needs
USER SENSITIVITY IN SERVICE OPERATIONS	• Project ASK provides answers within days • Classes for Interinstitutional Workships located near users		• Information Retrieval Service provides materials within days • Consultant assistance provided immediately over the telephone
USER-ORIENTED KNOWLEDGE BASE	• Project VALUE offers large variety of validated and promising practices, going beyond NDN pool		• Information Retrieval Service offers illustrative practices and products, and not just stracts and articles
IMPLEMENTATION ASSISTANCE	• Project VALUE uses two types of linkers, one of which is located within member LEAs	• Staff development staff works as linker to LEA curriculum development specialists	• Consultants provide assistance on implementing variety of educational programs, including those to meet provisions of federal and state laws.
FOLLOW-UP INFORMATION FROM USERS	• Analysis of all field contacts • Specific form used for feedback on Project ASK • Questionnaire given to participants in Interinstitutional Workshops	• Specific form used for feed-back on Staff Development Program	• Users fill out forms about satisfaction from services

utilization functions. Thus, all of our three case studies also included intergovernmental relationships.

This need to distinguish between complex and simple arrangements may be considered an important finding from our study. The distinction was not part of the original study design, nor is it explicitly discussed in the individual case studies.* Nevertheless, re-examination of the case study evidence showed the inadequacy of the initial within-case explanations. In particular, each case study had focused on the collaborative arrangements among three types of organizations (SEA-REA-LEA--see Figure 2-1), but the within-case explanations, applied to the relationships among the three organizations, seemed relevant to each in a qualitatively different way. For instance, the "mutual exchange" explanation did not appear to be dominant in accounting for one set of relationships (between REA and LEA) yet appeared, as the following subsections will show, to be important for other reasons in accounting for another set of relationships (between SEA and REA). Furthermore, our initial graphic rendition of the SEA-REA-LEA relationships, as portrayed in Figure 2-1, ignored the fact that SEAs often had a direct relationship to LEAs, and that this in turn affected the REA-LEA relationship.

The essence of a complex arrangement is that there are at least two types of relationships among the participating organizations. The first type covers the basic *knowledge utilization functions* (maintenance of a knowledge base and application in a practice-setting), and would alone constitute a simple arrangement. The second type is based on a broader set of what may tentatively be regarded as *"intergovernmental" functions* (whether in fact the organizations are units of government or not, the intergovernmental notion seems to be

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*For the sake of allowing the reader to trace the evolution of these findings directly, no attempt has been made to revise the original case studies. Nevertheless, we believe the reader will find the synthesis below to be not only an accurate rendition of the evidence presented in the case studies, but also a conceptual clarification that sorts the evidence more effectively.

appropriate; thus, interlocking directorates among private corporations might be considered "intergovernmental" relationships). Simply as a graphic device, Figure 4-3 shows how a complex arrangement can be portrayed, with the knowledge utilization relationships shown in the vertical dimension and the intergovernmental relationships appearing in the horizontal dimension.

Complex arrangements can indeed be complex and difficult to analyze. In some cases, the same two organizations may collaborate on the basis of having both knowledge utilization and intergovernmental relationships. However, the reasons for their successful collaboration might be different, depending upon which relationship was involved. Similarly, one of the participating organizations may have a knowledge utilization relationship with another, but an intergovernmental relationship with yet a third organization. Variations in these relationships were found in our three case studies, and a broader study of the entire set of SEA-REA-LEA relationships would undoubtedly reveal the full complexity of these interorganizational arrangements. Nevertheless, for the more limited purpose of our study--which mainly focuses on knowledge utilization--the discussion is directed at the most pertinent situation in the three cases: where the REA and LEA have a relationship based on knowledge utilization functions, and where the SEA has an intergovernmental relationship with either the REA or LEA, or both.

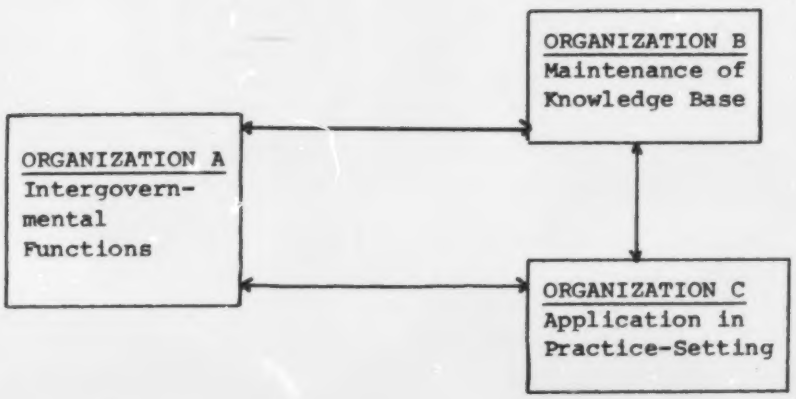
Basic Intergovernmental Functions

The SEA's relationships can occur as a result of at least four different intergovernmental functions:

- Implementing the governance rules that control an REA or LEA, as set forth by state legislation;
- Providing general resources to either an REA or LEA;
- Administering direct services through the REA or LEA; and
- Issuing specific mandates that affect an REA or LEA.

Figure 4-3

FUNCTIONS OF COMPLEX INTERORGANIZATIONAL ARRANGEMENTS



As for the first function, the REAs and LEAs in our three case studies had all been formed as a result of state legislation. Table 4-6 summarizes the legislation governing the basic existence of each of the three REAs. Of the three, the broadest and most supportive mandate for an REA is found in Michigan, where all LEAs must be part of an ISD, and where the ISD also has direct access to state and local funding sources. The EICs in New Jersey have a somewhat less supportive mandate, mainly because state funding is a result of a budget allocation rather than an aid formula, and because the EICs have no local taxing authority. Finally, the BOCS in Colorado have the least supporting mandate, not only because of the meager funding support from the state, but also because LEAs need not belong to a BOCS.

The effects of these different governance rules have already been discussed in terms of knowledge utilization processes and simple organizational arrangements, because the rules affect the REA-LEA relationship. The complex interorganizational arrangements become relevant when it is realized that these governance rules also affect the way that a particular state education agency (SEA) will relate to an REA.

In a similar manner, one can summarize the other three types of functions that affect SEA-REA-LEA relationships. The major examples related to knowledge utilization services are shown in Table 4-7.* Thus, it can be seen that another major SEA function is to develop a contract with the REA as a service performer.

Why Complex Arrangements Work

In analyzing the complex interorganizational arrangements, the focus of attention must still be on the knowledge utilization functions, because they are the main topic of our entire study. Thus, what is important is not the overall working of the complex arrangements, but the potential effects of this arrangement in enhancing or creating conflicts for REA-LEA relationships regarding knowledge utilization.

*Note again that the table ignores the numerous SEA-REA-LEA relationships that are not directly related to knowledge utilization.

Table 4-6

LEGISLATION GOVERNING ESTABLISHMENT OF REGIONAL EDUCATION AGENCIES

WAYNE-ISD: State of Michigan, Public Act 190 (1962)

- -- Defines ISDs across state, specifying that every LEA must be included in one of them
- -- Specifies five general "required duties" of ISDs = special education, vocational-technical education, curriculum consultation, data processing, and knowledge utilization services
- -- Grants "permissive authority" to conduct other activities
- -- Provides state aid to ISDs, based on formula allocation (formula changed in 1975 to per pupil basis--Public Act 261--favoring larger ISDs such as Wayne)
- -- Gives ISDs own local taxing authority

NCEBOCS: State of Colorado (1965)

- -- Allows formation of BOCS across state, "wherever feasible" but LEAs need not be a member of a BOCS
- -- Grants "permissive authority" to BOCS, to provide services at the discretion of participating LEAs, which have ultimate responsibility for prescribing learning materials
- -- Provides $10,000/year to each BOCS in state allocation
- -- Precludes BOCS from having own local taxing authority

EIC-S: State of New Jersey Title 18A (1978)

- -- Establishes EICs in state, with each LEAs falling within the region of one EIC
- -- Specifies general types of program improvement support and assistance to be offered by EICs: diagnosis of problems; examination of alternative solutions; planning, developing, and making available information on instructional and management processes, staff development, implementation assistance
- -- Grants "permissive authority" to conduct other activities, as requested by the EIC governing boards and approval by the Commissioner
- -- Provides annual allocation to EICs, based on regional needs and the availability of state funds
- -- Precludes EICs from having own local taxing authority

Table 4-7

FUNCTIONAL RELATIONSHIPS BETWEEN STATE EDUCATION AGENCY AND REGIONAL EDUCATION AGENCY

	Regional Education Agency		
	WAYNE	NCEBOCS	EIC-S
IMPLEMENTS GOVERNANCE RULES	State law prescribes conditions of existence of ISDs (see Figure 4-5); SEA to have minimal role in directing ISDs	State law prescribes conditions of existence of BOCS (see Figure 4-5); SEA to have moderate role in directing BOCS	State law prescribes conditions of existence of EICs (see Figure 4-5); SEA to have moderate role in directing EICs
PROVIDES GENERAL RESOURCES	None; state funds are from state-aid formula, not allocations of state department	SEA provides $10,000 annual allocation	SEA provides substantial annual allocation
ADMINISTERS DIRECT SERVICES	SEA contracts to Wayne for numerous institutional services	SEA contracts to NCEBOCS for some services (e.g., migrant education)	SEA contracts to EIC-S for some services (e.g., nutrition education, vocational education)
ISSUES MANDATES	None directly affecting WAYNE	None directly affecting NCEBOCS (though Colorado accountability mandates law improvements by LEAs	SEA implements "thorough and efficient" legislation, establishment of high school graduation standards, and evaluation of tenured teaching staff

Of the possible explanations for effective complex arrangements, the occurrence of *mutual exchanges* appears at first to be the most important. (This should be contrasted to the explanations for effective simple arrangements, in which mutual exchanges were not as prominent.) The mutual exchanges can be as open and direct as a service contract: The SEA provides funds to the REA in return for the delivery of a specific service, often involving some knowledge utilization component (e.g., the NCEBOCS Migrant Resource Center) that affects LEA practices. As another example, a mutual exchange may be said to occur when an SEA allocates additional resources for a priority topic--e.g., career education and special education in Michigan--and for which an REA develops an appropriate service. Other mutual exchanges are less obvious, and the success of the complex arrangement may be explained by mutual exchanges enhanced by compliance to specific mandates. Thus, in EIC-South, the SEA allocates general funds to the EIC, in return for which the EIC is to serve LEAs needing school improvements. Though a mutual exchange is taking place, one also suspects that the EIC also responds out of a sense of compliance, because a reluctance to cooperate might not only lead to a threat to reduce the SEA's allocation of funds but could also lead to dissatisfaction with the basic governance functions.

Nevertheless, in spite of the potential usefulness of the mutual exchange explanation, successful complex arrangements appear to require more than a set of mutual exchanges. From the case studies, the evidence most in need of explanation has to do with the variations within the complex interorganizational arrangement involving EIC-South. Neither the Wayne ISD nor the NCEBOCS appeared to have displayed the same variations in coordinating SEA mandates as had occurred in EIC-South. In particular, two situations within EIC-South need to be highlighted. In the first, the EIC has only gradually been able to respond to the SEA's mandates regarding the "thorough and efficient" (T&E) legislation of 1975. SEA officials initially felt a sense of dissatisfaction with the EIC's priorities, and may still appear unable to understand why EIC-South was not able to turn immediately to the SEA's priorities, even though the SEA provides substantial and direct

allocations of funds to the EIC. Juxtaposed against this situation is the EIC-South's response to another SEA mandate, calling for the evaluation of tenured teaching staff. In this second situation, EIC-South has provided considerable assistance to LEAs, which have asked EIC-South to help in the development of evaluation methods, of training programs to compensate for deficiencies, and of access to relevant information. In this second mandate, EIC-South appears to have initiated a vigorous and effective knowledge utilization service.

Both of these mandates involve the same set of mutual exchanges, yet one mandate has been implemented with much greater ease than the other. To this extent, the mutual exchange explanation is not fully satisfactory. Nor do the other available explanations, used previously for the simple arrangements, appear to discriminate between these two situations. For instance, the two situations are not different with regard to the availability of external resources, to the use of formal agreements, or even to the development of appropriate networks.

Instead of any of these explanations, one alternative that discriminates better between these two situations is the notion of a "congruent" arrangement: Governance relationships can enhance knowledge utilization where an SEA *imposes congruent conditions* on the organization maintaining the knowledge base (the REA) and the organization applying the knowledge in a practice-setting (an LEA). Thus, if an SEA desires to mandate certain changes in schools, it must orchestrate the mandate by (1) informing specific LEAs what they are supposed to do and what assistance they can expect from an REA, and (2) simultaneously informing an REA of the specific LEAs to be assisted and the kind of assistance to be provided. Furthermore, if such information is made available early enough, both LEAs and the REA can prepare for their collaborative activities.

In the case of the T&E mandate, the case study evidence suggests that such congruence did not initially exist. First, the SEA mandate was mainly for LEAs to improve the educational performance of their students and was set forth in only vague policy terms. Neither a specific curriculum topic, to be applied to all LEAs, nor a specific innovation was specified, making it difficult for the REA to prepare

the appropriate assistance.* Second, because the focus was on an ultimate outcome (student performance), which only has an indirect relationship to curriculum innovations, LEAs were not necessarily likely to consider the use of services from an REA as their top priority in responding to the mandate. In short, the T&E mandate did not provide the basis for immediate collaboration between an REA and an LEA.

This may be compared to the evaluation of tenured teachers, which called at the outset for a specific innovation that the LEAs could implement and for which assistance from an REA was directly appropriate. The REA could also respond readily because such evaluation methods were within the range of its immediate knowledge base. If, in contrast, the tenured teacher mandate had been made in the same terms as the T&E mandate--e.g., putting greater emphasis on the ultimate outcome (teacher performance) and less emphasis on the installation of a specific new practice (teacher evaluations)--the same difficulties might have been encountered.

In summary, complex interorganizational arrangements may work best where there is a set of mutual exchanges, but where any other directives also have congruent implications for the participating organizations. This observation can be depicted, for all three case studies, in Figure 4-4. The figure contrasts the situations in the Wayne ISD and the NCEBOCS--where service contracts were the main foundation for the SEA-REA relationships--with the situation in EIC-South, where SEA mandates were also important. In the Wayne ISD and NCEBOCS cases, service contracts and hence mutual exchanges provided the major basis for intergovernmental collaboration but also produced no *in*congruent demands on the REA and LEAs; in EIC-South, these service contract relationships were augmented by several mandates, which required congruent demands on the REA and LEAs in order to be implemented effectively.

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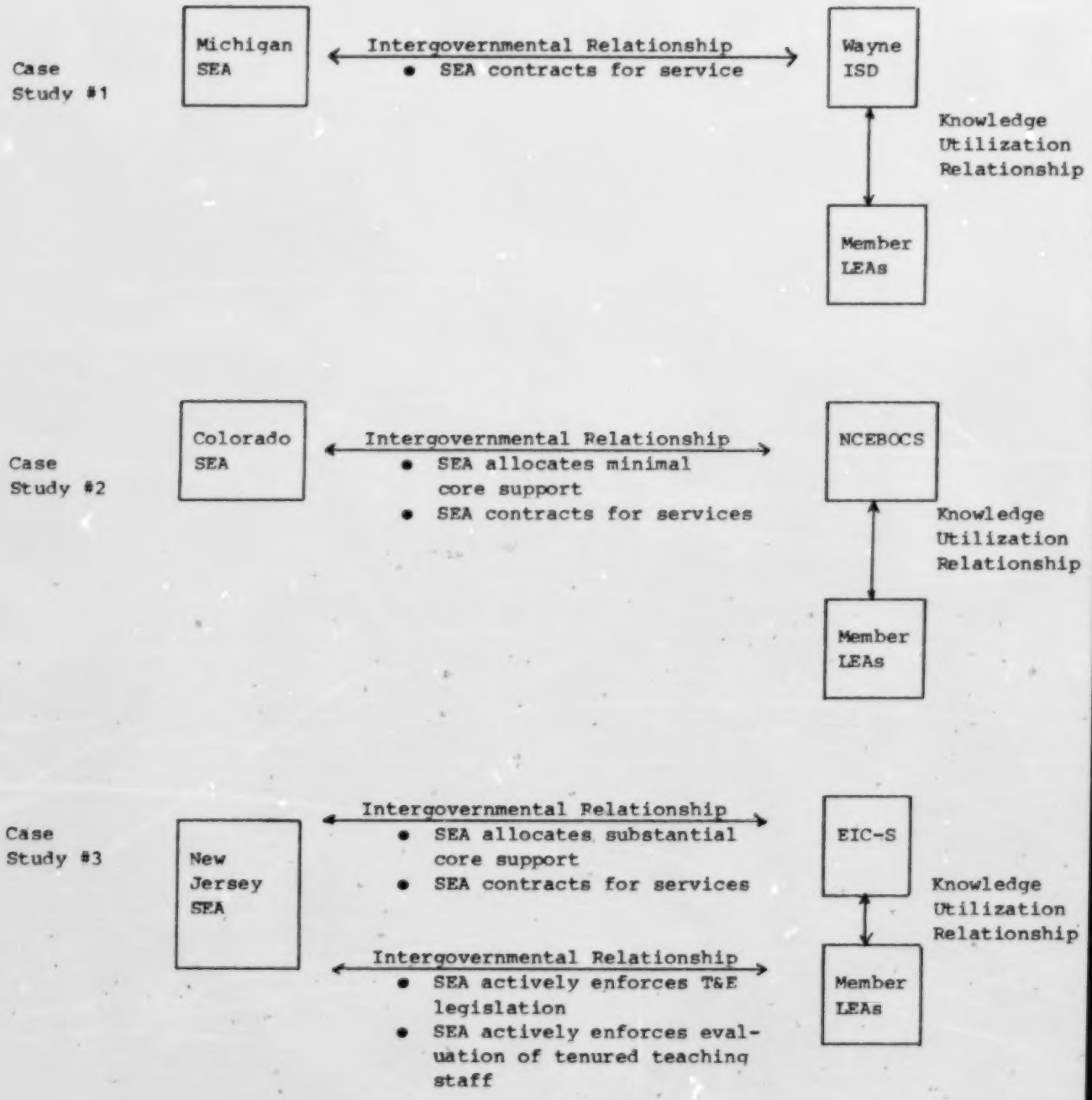
*Even with this difficulty, an REA faced with such a situation can usually develop programs to address local districts' needs. The REA incurs a risk in doing so, however. Although the services the REA provides are somewhat legitimized in the eyes of the districts merely because the REA is offering them, the services may become irrelevant when the state changes the parameters of the mandate, as can occur when the mandate is not clearly articulated at the beginning. Serious dysfunctions may arise in this situation, with the worst example being the REA's credibility being weakened or lost for future technical assistance to its users.

Figure 4-4

MAJOR FEATURES OF THREE COMPLEX INTERORGANIZATIONAL ARRANGEMENTS



This analysis of complex interorganizational relationships is potentially signficant from a broader policy standpoint, because the very same intergovernmental roles are often filled by federal agencies rather than by SEAs. The federal agencies also have the same four intergovernmental functions--i.e., to implement governance rules, to provide general resources, to administer direct services via contractual relationships, and to issue specific mandates--and the explanations entertained here may also extend to the most frequent federal situation where changes are ultimately to be instigated at the local level. Thus, our findings should be tested with other interorganizational arrangements. The next chapter discusses this and other future research topics, as well as the tentative policy implications of our study.

Chapter Five

IMPROVING FUTURE COLLABORATION

The three case studies have produced one picture of how organizations collaborate for knowledge utilization. The preceding two chapters have synthesized the findings across cases, showing the overall pattern of outcomes and developing a more general explanation for organizational collaboration.

Because the findings are based on three case studies, the first priority is for further corroboratory research. Thus, this chapter first presents recommendations for future research. Later sections then indicate the potential policy implications of our study, should the findings be corroborated. These implications must be considered speculative, and have been organized in a hypothetical manner, as if the authors had been asked to design such a service from scratch or to improve an existing one.

A. SUGGESTIONS FOR FUTURE RESEARCH

The purpose of this study was to examine how knowledge utilization occurred within an interorganizational arrangement. Topics needing further research include those aimed at confirming the findings of the present study, as well as new topics that deserve to be explored.

Research on Interorganizational Arrangements

The first topic addresses the ways in which knowledge may be transferred to users. A common way of providing knowledge utilization services, for example, has been within the same organization, or on an *intra*organizational basis. This occurs when a school district provides services to its own staff. An example might be staff development workshops that are arranged within the district and are led by district administrators for other administrators or teachers. Another example was found in the Detroit school district, where the district's central

office had established an information retrieval service for use by the district's own staff. Our study, however, only investigated how knowledge utilization services are provided *inter*organizationally, by individuals within one organization. Thus, one test of our findings--presumed to be attributable to interorganizational arrangements--would be to compare them with findings from intraorganizational situations. Furthermore, such research could compare the advantages and disadvantages of these two types of arrangements.

Second, the present study deliberately selected exemplary arrangements, in order to learn why the arrangements performed in a productive manner. However, the findings from this study and other studies of interorganizational arrangements in education need to be corroborated through research that includes an examination of less exemplary cases.

A third topic involves an explanation for successful knowledge utilization that we found prominent in this study. An explanation that was discussed in Chapter Four was that continual interpersonal communication among providers and users of knowledge utilization services was important to the success of the three interorganizational arrangements we studied. This communication process led to the development of a network and needs to be examined further. For example, the different ways in which interpersonal communication occurs should be studied, especially focusing on professional networks whose memberships cut across organizations.

Another explanation this study found to be important was that success depended heavily on the organizations' access to external resources. The fourth and fifth topics for future research should therefore further explore this finding. The fourth research topic is one that would look at how federal funds and other external funding sources can be used to support knowledge utilization services and interorganizational arrangements in education. The research should include an examination of currently available funding sources and the combinations in which they have been used.

The fifth topic is one that is suggested in light of possible reductions in federal funds that are available to support knowledge

utilization services. Because of these possible reductions, some interorganizational arrangements may be in jeopardy, unless they are able to charge users' fees for the assistance they provide. Future research should address this issue and specifically might seek to determine whether any interorganizational arrangements have undergone successfully the transition from externally-supported to user-supported services.

Research on Knowledge Utilization Services

Another group of topics focuses on knowledge utilization services and the way in which these services might be designed and implemented, regardless of the organizational arrangements. Thus, a sixth topic for future research might be an examination of the ways in which knowledge utilization services can anticipate the changing needs of their user population. In this study, it was found that, in some cases, new types of users could become relevant; in other cases, the users remained the same, but their needs changed. Thus, how new services evolve from old services should be studied. Unfortunately, previous research has tended to emphasize new services or services in a steady state of operation, as in our study.

A seventh topic might be the effectiveness of different types of linker arrangements. Individuals in a service agency may relate to users according to a particular geographic area (e.g., several school districts) or a specific curriculum or administrative topic. These two ways of arranging linker activities are in constant conflict, and the differences between them need to be explored.

An eighth and final topic for future research is also suggested by our study. Although many questions have been raised about the effects of knowledge utilization on school improvement, only an indirect relationship is believed to exist between the two. Despite this, however, knowledge utilization services are occasionally judged in terms of school improvement and student achievement (e.g., the services of EIC-South). This may create a false perception of the value and contribution of knowledge utilization services because of

the indirectness of the relationship. Thus, further research should develop better measures of knowledge utilization outcomes and further explore the relationship between knowledge utilization services and school improvement.

B. SUGGESTIONS FOR MORE PRODUCTIVE INTERORGANIZATIONAL ARRANGEMENTS

Research on the eight topics just discussed would significantly add to our understanding of interorganizational arrangements. Moreover, this research would serve to confirm or modify the findings from this study. Nevertheless, in spite of the need for this further research, the findings from the present study may be reviewed for their tentative policy implications. These are discussed in three categories: making services responsive to users, making simple arrangements work, and making complex arrangements work.

Making Services Responsive to Users

Regardless of whether a knowledge utilization service was based on an interorganizational arrangement or not, user-oriented procedures were found to underlie the basic service. Six user-oriented functions have been identified in Chapter Four, ranging from the assessment of user needs to the follow-up procedures for determining user satisfaction. When all of the functions are performed well, a knowledge utilization service is likely to have successful outcomes. The specific steps needed to fulfill each function, of course, vary according to the specific service situation, and the previous chapter has shown the specific steps that were implemented by the three REAs (Figure 4-5).

The user-responsive orientation was found, in each of the individual case studies, to be the dominant explanation for successful knowledge utilization. Nevertheless, later reflection yielded an important interpretive insight: Although user-responsive conditions are essential, they are not distinctively interorganizational. That is, we would recommend a user-responsive orientation whether a service

were the result of an *intra-* or *inter*organizational arrangement. To this extent, the basic purpose of the study--to identify specific interorganizational conditions--had still not been fulfilled. A re-examination of the case study evidence from the interorganizational perspective produced the first important distinction among inter-organizational arrangements: whether an arrangement was simply between a knowledge-producer and a knowledge-user (a simple arrangement), or whether the arrangement also involved some intergovernmental functions (a complex arrangement).

Making Simple Arrangements Work

Simple arrangements must begin with the user-oriented services just discussed. We repeat: Such an orientation is essential to the success of any knowledge utilization service, whether interorganizational or not.

Access to External Resources. Among strictly interorganizational conditions, however, the findings showed that organizations were most likely to collaborate when their joint action led to greater access to external resources. The variations among the three cases reinforced this conclusion because the case having the least success in producing knowledge utilization (NCEBOCS) also had the least access to external funds. (The tradition of local autonomy in Colorado has meant that the entire state tends to depend less on state or federal resources than is the case elsewhere in the country.) In general, however, virtually all of the knowledge utilization services in all three cases were supported by external funds rather than by users' fees.

This conclusion alone may have important policy implications, for another way of phrasing it is to say that knowledge utilization services cannot be financially independent. We believe this is correct, for reasons that are peculiar to knowledge utilization.* The service itself consists of intermediate benefits (e.g., transmittal of specific pieces of information) that cannot be assessed directly in terms of their contribution to school improvements, even though the connection may be an important one. The only "fee" structure that could be imposed

*As discussed earlier, however, this is a topic needing additional research. See Chapter Four, section on "Why Simple Arrangements Work."

would have to focus, however, on these intermediate benefits. For example, one might have to pay a fee for every computer search conducted by an information retrieval service, or for every workshop undertaken by a staff development service. But because these intermediate benefits have an indirect relationship to school improvements, users are unlikely to pay such fees *when general resources are limited.* The intermediate benefits simply would not appear worthwhile in comparison to other priorities.* In short, knowledge utilization services have a problem that parallels all of education: How can one interpret the value (and hence reasonable cost) of new information or knowledge?

In contrast, we have noted some REA services for which users' fees are a potentially viable source of support. Computational services, payroll services, the production of graphic displays and printed materials for the classroom, and a whole host of administrative "support" services fall into this category. The reason that these services are more appropriate for a service-charge arrangement is that the direct product of the service, rather than merely being of intermediate benefit, is the only benefit that matters. Users are willing to pay for such support services because the direct service benefits--e.g., computer test scoring--are needed, independent of any connection to student improvement.

This combined observation--of the infeasibility of users' fees sustaining knowledge utilization services but the viability of such fees in supporting other kinds of services--suggests one possible alternative when external resources are unavailable to support knowledge utilization services. The alternative consists of combining knowledge utilization services with these other services. Computational

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*In fact, research by Warren Walker of the Rand Corporation (personal communication) on municipal services suggests that these intermediate activities are those that are eliminated *first* when budget cuts are made. Thus, agencies reduce the allotments for staff travel to professional conferences, eliminate funds for information searches, and generally reduce knowledge acquisition activities. The effect that these actions eventually may have on knowledge production activities and the availability of funds to support these activities is an issue that has not yet been examined.

fees, for instance, could cover the costs of the support service as well as the cost of a computer-based information retrieval service that would be offered free to users. Similarly, knowledge utilization services should be associated with specific curriculum topics--such as special education, migrant education, and nutrition education--where such topics are the focus of special programs.

Overall, the main point is that interorganizational collaboration for knowledge utilization is not likely to occur without access to external resources. Although this may lead to a bleak conclusion when budgetary environments are restrictive, there is also a positive side: External agencies can foster greater collaboration between organizations simply by making resources available.

Interorganizational Networks. In addition to access to external resources, knowledge utilization services are heavily dependent on interorganizational networks. Thus, at both organizational and interpersonal levels, communications activities should be extensive, regular, and longstanding.

The types of phenomena uncovered by the case studies went beyond the common gamut of professional activities: attendance at professional conferences and transmission of written materials. Instead, the case studies indicated a diverse array of network activities, including the important role of job mobility. Certain types of mobility are important, because if an organization that provides knowledge utilization services is staffed by persons who have previously been among the users of these services, communication between these two groups of individuals is facilitated. A corollary point is that the salary levels of the service organization should be slightly higher than those of the organizations in which users are located so that mobility occurs in the correct direction. If the salaries have the reverse relationship, mobility is likely to be in the opposite direction and the interorganizational and interpersonal network is unlikely to be strengthened; though there is still a link, a previously central person has now become but one of many users, thereby diluting the network effect.

Whatever the mechanism, a successful network involves people who have individualized contacts with each other. This allows ideas to be exchanged on a continuous basis. A marketplace for ideas is created this way, allowing individuals within an REA to search continually for new ideas to deal with problems they have been told about, and allowing users to know what kinds of innovations are likely to be emerging in the near future. To put it another way, ongoing communication helps each party to be proactive and hence more responsive when specific needs arise. The payoffs cannot be cast in specific terms but have to do with the fundamental aspects of a knowledge utilization service: visibility, credibility, and responsiveness to users' needs.

Mutual Exchanges and Collaborative Mandates. In addition to access to external resources and the development of an active network, simple arrangements will also be more productive if there are mutual exchanges and appropriate collaborative mandates. The case studies suggested that these mutual exchanges are not likely to involve fees or funds, and for this reason the appropriate mandate should not assume this type of exchange.

Instead, the mutual exchanges that were found called for one organization to provide assistance to another organization, in return for which the first organization received some type of bureaucratic legitimacy (e.g., staff development services). In general, the exchanges are likely to occur when the collaborating organizations can both advance their self-interest; a previous study by one of the authors (Yin, 1977) has described some of the conditions related to these bureaucratic self-interests, which include increased legitimacy and minimization of risk.

In this context, the most appropriate mandates are ones where users (e.g., LEAs) are formally constituted as participants in a common service (e.g., an REA service). Required rather than voluntary membership is preferable, because the users can expect to seek assistance from the central source, and the two organizations can expect to develop a long-term and stable relationship.

In summary, simple arrangements are those in which the collaborating organizations mainly deal with knowledge utilization services: One or more organizations provide such services, and one or more other organizations act as users. This type of arrangement is likely to work when user-oriented services are complemented by: access to external resources, the development of an interpersonal network between service providers and users, and the establishment of mutual exchanges and appropriate collaborative mandates. By comparison, reliance on users' fees for knowledge utilization services is not likely to work, nor are other interorganizational conditions--e.g., the existence of formal agreements--important.

Making Complex Arrangements Work

Third-party organizations may have an intergovernmental relationship with the organizations involved in the simple arrangement. The intergovernmental relationship may be based on the implementation of governance rules, the provision of general resources, the administration of direct services, or the issuance of specific mandates. In general, these are the kinds of activities conducted by federal or state agencies in relation to local governments, including LEAs.

For the present study, the crux of the complex arrangement was its effect on the knowledge utilization service. In other words, our concern was not with the broader outcomes of intergovernmental relationships. The three case studies suggested that, under such conditions, the complex arrangement will be successful if the third-party organization either offers a mutual exchange situation or issues a mandate that is congruent to the organizations in the simple arrangement. The mutual exchange situation can simply be the provision of services under a service contract. For instance, if a state department of education were committed to the provision of services for handicapped children, the services could be obtained through an award to an REA-LEA collaborative arrangement; embedded in the activities might be some knowledge utilization services.

Congruent mandates imply that the third-party organization make demands of service providers (REAs) that will be compatible with the demands on service users (LEAs). Knowledge utilization will not occur

if the demands are incompatible or are directed to one party, but not the other.

The Special Case of Federal-Local Relationships

Straightforward as these lessons appear to be, let us consider the special case of federal agencies, both with regard to simple and complex arrangements, and speculate on how existing federal programs both facilitate and discourage knowledge utilization at the local level.

Federal agencies frequently serve in the role of third parties. The major lesson about the role of federal agencies is that they can, as third-party organizations, encourage or discourage simple inter-organizational arrangements for knowledge utilization. Three examples are immediately relevant: the ESEA Title IV-C program, the NDN program, and the Follow Through Program. Each of these federal programs is aimed at improving elementary and secondary education, but each also requires the collaboration of two or more organizations before action can occur.

In the case of the Title IV-C program, federal funds may be used by organizations that offer knowledge utilization services, as well as by LEAs (adoption grants). For NDN, funds may be used by developers (LEAs that have developed a curriculum product validated through the Joint Dissemination Review Panel) and by state facilitators, so that both parties may work with other user organizations (other LEAs) to implement new practices. One potential weakness of the NDN program, however, is that funding assistance is not provided to these implementing sites, to compensate for the necessary staff resources, release time, and other expenses related to the new practice. Finally, for Follow Through, the federal program stipulated the coordinated action of an organization that produced knowledge (a model sponsor) and a user organization (an LEA).

In all of these arrangements, the federal program has provided external resources needed for simple arrangements to work. The distinctive nature of these federal programs, in short, is that they have encouraged interorganizational collaboration, even though the substantive aim might have been to improve educational practice. These

examples show how third-party activities, in a complex interorganization arrangement, can stimulate knowledge utilization relationships among two or more other organizations.

The problem with these and other federal programs, however, has been that the interorganizational implications have not been explicitly considered. Thus, the NDN program should have included a provision for assistance to the LEAs that were to become users; and the Title IV-C program regulations have been ambivalent about support to service-providing organizations (e.g., REAs). For instance, information retrieval services are now ineligible for Title IV-C support, and this change affected EIC-South. Instead, federal programs should be deliberately analyzed according to their interorganizational implications--to determine whether collaboration among different types of organizations is being encouraged or not. One supposition is that such an analysis has not usually taken place, and that the interorganizational implications of federal programs have not been explic tly identified as part of the program design process.

One other point is also important. This is related to the observations regarding the role played by interpersonal networks. Because continuous and extensive communication is necessary for organizations to collaborate and because the networks can only be developed over a period of time, the interorganizational arrangements cannot be expected to have an immediate payoff. Similarly, a program that changes its regulations for interorganizational arrangements should do so on a most cautious basis: Interorganizational arrangements cannot be formed or broken on such a rapid basis.

In summary, federal agencies generally have a legitimate third-party role in complex arrangements for knowledge utilization. The role may be reflected in any of the common intergovernmental functions--i.e., establishing the basic rules for governance at the local level, providing resources, delivering specific services, or issuing mandates. Whatever the function, many federal initiatives in knowledge utilization have implicitly called for interorganizational collaboration. Whether one favors interorganizational collaboration or not, the initiatives need to be analyzed explicitly to understand this impact.

Policy Implications

Four policy implications emerge from the present study. These implications are stated below, even though any policy actions cannot be made solely on the basis of a single research study, and confirmatory studies are needed.

First, collaborating organizations should jointly and actively seek external resources to support knowledge utilization services (or identify ways of supporting such services through related curriculum and administrative services). In particular, organizations should not assume that knowledge utilization services will be self-supporting on the basis of users' fees.

Second, collaborating organizations should identify the interpersonal and interorganizational connections among their professional staff members. Communications with members of other organizations should especially be encouraged and established networks should not be inadvertently broken.

Third, where interorganizational arrangements exist, the organization that provides the knowledge utilization services (in our case, the REA) should attempt to recruit new staff members from the clientele population of the area being served. Such a practice will strengthen the network that is already present and will minimize the orientation that would otherwise be necessary before new staff become familiar with the clientele being served.

Fourth, third-party organizations must recognize the effects their actions have on interorganizational arrangements. Formal analysis of these effects should be undertaken. If the policy is to encourage interorganizational collaboration, the third-party organizations should promote mutual exchange situations and make congruent demands on the other participating organizations.

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Appendix A

REAs BY STATE

Table A-1

STATES THAT HAD ESTABLISHED REGIONAL EDUCATION AGENCIES BY 1976

STATE	YEAR OF LEGISLATION	TYPE OF LEGISLATION
California	1964	Permissive
Colorado	1965	Permissive
Connecticut	1967	Permissive
Florida	1968*	No legislation
Georgia	1972	Mandatory/Voluntary
Idaho	1967	Permissive
Illinois	1969	Mandatory
Indiana	1976	Mandatory/Voluntary
Iowa	1974	Mandatory
Kentucky	1972*	No legislation
Louisiana	1975*	No legislation
Maryland	1973	Permissive
Massachusetts	1966	Permissive
Michigan	1963	Mandatory
Missouri	1928*	No legislation
Montana	1975	Mandatory
Nebraska	1965	Mandatory/Voluntary
New Hampshire	1969*	No legislation
New Jersey	1968*	No legislation**
New York	1948	Permissive
North Carolina	1971*	No legislation

Table A-1 (cont'd)

STATE	YEAR OF LEGISLATION	TYPE OF LEGISLATION
Ohio	1959*	No legislation
Oklahoma	1974	Mandatory
Oregon	1963	Mandatory
Pennsylvania	1970	Mandatory
South Carolina	1965*	No legislation
Tennessee	1970	Permissive
Texas	1967	Mandatory/Voluntary
Utah	1969	Permissive
Virginia	1975	Permissive
Washington	1969	Mandatory
West Virginia	1972	Mandatory/Voluntary
Wisconsin	1965	Mandatory
Wyoming	1969	Permissive

* For states that have regional education agencies but have no legislation, the year the first REA was established is given.

** Since these data were collected, New Jersey has enacted legislation (1978) to establish REAs in the state.

Source: Davis, 1976.

Table A-2

SELECTED CHARACTERISTICS OF REGIONAL EDUCATION AGENCIES, BY STATE (1978)

State	Type of REAs	No. of REAs†	No. of REAs Eligible to Receive Federal Funds	No. with any three of: Curriculum Services, Staff Development, R&D, Information Services	No. of LEAs Served (range)	No. of REAs with LEAs Having Over 25,000 Students
Alaska	C	3	3	2	2-11	0
Arizona	C	15	8	5	2-[illegible]	4
	SD	4	3	2	1-19	1
California	SD	53	53	NA	NA	NA
Colorado	C	15	15	5	5-19	0
Connecticut	C	1	1	1	21	0
Florida	SD	4	4	1	5-42*	1*
	R	8	8	0	2-17*	5*
	C	9	9	6	2-9	1*
Georgia	C	16	15*	12	5-43	1
Idaho	C	1	1	1	6	0
	R	2	1	2	28-32	0
Illinois	SD	23	23	8*	4-20*	0*
	C	129	129	0	NA	NA
Indiana	C	4	4	1	13-34	0
Iowa	SD	15	15	15	12-63*	2
Kansas	C	22	22	2	3-29*	0
Kentucky	R	6	6	3	8-19	1
	SD	1	1	0	21	0
Maine	R	1	0	0	0(admin. for SEA)	0
	C	3	3	1	4-7	0
	SD	8	8	1	3-11	0

Table A-2 (cont'd)

State	Type of REAs	No. of REAs†	No. of REAs Eligible to Receive Federal Funds	No. with any three of: Curriculum Services, Staff Development, R&D, Information Services	No. of LEAs Served (range)	No. of REAs with LEAs Having Over 25,000 Students
Maryland	R	1	1	0	3	0
Massachusetts	C	6	6	6	28-96	3
	C	44	44	2*	10-22*	3*
Michigan	SD	21	21	10*	2-36	3
Minnesota	C	6	6	4	35-89*	1*
Mississippi	C	1	1	1	11	0
Montana	SD	56	56	NA	NA	NA
Nebraska	C	15	15	7	1-114	2
	SD	85	0	NA	NA	NA
New Hampshire	SD	10	10	7	1-7*	0*
	C	6	6	3	5-41	0
	R	3	3	1	NA	NA
New Jersey	R	37	0	0(Admin.)	NA	NA
	SD	3	3	2	149-158*	2*
New York	SD	35	4	15	7-56	0*
North Carolina	R	3	35	2	1-16*	2*
	C	1	1	1	10	0
North Dakota	SD	6	5	1	1-63	0
	C	17	10	4	4-69	0
Ohio	SD	38	37	17	1-102	0
	R	12	4	6	3-68	5
	C	54	53	3	5-45*	0*

Table A-2 (cont'd)

State	Type of REAs	No. of REAs†	No. of REAs Eligible to Receive Federal Funds	No. with any three of: Curriculum Services, Staff Development, R&D, Information Services	No. of LEAs Served (range)	No. of REAs with LEAs Having Over 25,000 Students
Oklahoma	R	20	20	19	15-48	2*
	SD	68	68	NA	NA	NA
Oregon	SD	13	13	7	3-35	1
Pennsylvania	SD	20	20	15*	1-46	1
South Carolina	SD	13	13	NA	NA	NA
Tennessee	R	5	2	3	6-28*	2*
	C	1	1	0	0	0
Texas	SD	139	139	16	13-99*	8*
Utah	C	1	1	1	9	0
Virginia	C	10	9	5	1-8	1
	SD	3	3	3	1	0
Washington	SD	9	9	5	15-60	1
West Virginia	C	8	8	5	1-12	1
Wisconsin	SD	19	19	3	16-44	2
Wyoming	R	1	0	1	4	0
	SD	2	2	1	1-7	0
	C	4	4	2	2-19	0

Key: C - Cooperative ISA
SD - Special District ISA
R - Regionalized ISA
NA - Data were not Available

*Date were not available for all ISAs in this category
†The number of REAs listed is the number that responded to Stephens's survey. More REAs than are listed many exist in the state.

Source: Stephens, 1978

Appendix B

FIELD GUIDE

FACE SHEET

A. Interviewer's Notes

1. Name of Respondent [BE SURE TO SPELL CORRECTLY]

2. Respondent's Organization

3. Name of Interviewer(s)

4. Date and Place of Interview

5. Length of Interview

B. Introductory Questions

1. What is your official title in this organization?
   [BE SURE TO GET BOTH TITLE AND OFFICE UNIT SPELLED CORRECTLY.]

2. When did you first begin in this position?
   [NOTE MONTH AND YEAR OF START OF CURRENT JOB.]

3. Could you tell me what job you previously held?

   Title:

   Dates: [Month and Year]

   General responsibility:

   And the job before that?

   Title:

   Dates: [Month and Year]

   General responsibility:

4. What would be the area in education that you would say you were most knowledgeable about, either through training or previous experience?

   PROBE FOR: - Curriculum expertise
   - Administrative expertise

5. This is a study of networks involving at least three types of organizations--LEAs, REAs, and SEAs. (Whatever two the respondent is not part of]: Have you ever worked in either one of the other two organizations? In what capacity?

   [NOTE: No need to ask this question if previous questions have already shown experience in both of the other organizations.]

I. WHAT IS BEING NETWORKED?

A. Background (REAs in general) [Throughout, refer to "REAs" by using terminology of state]

1. What is the history and extent of REAs in this state?
   COLLECT DOCUMENTS TO SHOW:

   - Number of REAs, currently
   - Date of first legislation (for new type)
   - Overall budget and staff for all REAs
   - Nature of governance relationships

2. Among all the REAs in this state, when was this particular REA founded? Is there anything that especially distinguishes this REA from the others in the state?

3. Are there any other regional or intermediate units in this state? [IF SO, NOTE:]

   - Number of such units
   - Differences between such units and the REA under study, in terms of jurisdiction and responsibilities

B. Background for this REA

1. What has been the organizational and budget history of this specific REA?
   COLLECT DOCUMENTS TO SHOW:

   - Annual budgets for last five years or more
   - Formal organization, present v. five years ago
   - Descriptions of current program (enumerate KU and non-KU activities; for KU activities, categorize by type of KU service)*
   - Governance structure
   - School population served: no. of schools and students; student income, race, and performance.

2. What have been the major sources of funding for the REA?
   COLLECT DOCUMENTS TO SHOW:

   - Sources of income, by type of governmental unit (federal, state, REA-own, LEA)
   - How funds are obtained through each of these sources, if some formula or governance rule is involved

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*Knowledge utilization activities occur when some external organization provides new ideas or assistance to an LEA, to improve regular classroom practice. This definition excludes classroom or administrative services (e.g., handicapped or busing programs) that are operated directly by the external organization. Within this range of KU activities, three specific types of KU services have been tentatively defined--in-service training programs, linking agent services, and I&R services. More may emerge during this inventory and should be noted.

3. What have been the general changes, if any, in this REA over the past five years?
   PROBE FOR:

   - Changes in nature or amount of funding
   - Organizational changes
   - Governance changes within the state
   - Changes in types of programs operated (KU and non-KU)

4. Have there been any studies of the knowledge utilization (KU) activities in this REA?

C. Background to the REA Network [The main focus is on knowledge utilization, not non-knowledge utilization, activities.]

1. How were the arrangements among the participating organizations in this particular network initiated?
   PROBE FOR:

   - Relevant SEA legislation or mandates
   - Enrollment of individual LEAs into network
     (LEAs may have joined as a group or individually)
   - Motives, needs, or roles of individuals or organizations

[NOTE: If there is any ambiguity, the "network" should be defined as those organizations participating in the KU activities.]

2. Were there any specific individuals who were essential to the formation of the network at the outset? If so, who?

3. Have these arrangements changed since their inception? In what way?

[NOTE: Try to determine every major shift in the arrangements since inception.]

4. Have the particular organizations in the network changed over the last five years?

5. Is this particular network very distinctive in comparison to the other REA networks in this state? [NOTE: This question differs from A-2 above.]
   PROBE FOR:

   - Size
   - Age
   - Scope of services
   - Model for other networks

D. Definition of the Network [NOTE: Some respondents will be asked about one KU service only.]

1. We are interested in studying how LEAs receive information and other knowledge utilization services from the REA. In particular, we understand that [three] such service[s] are your: [NOTE: Three KU services should be identified before fieldwork begins.] Could you describe all the organizations involved in [these services]? [Based on interviews and documents, please develop an organization chart for the network.]

   [NOTE: The chart should identify:
   - The host organization--obtain, if possible, the entire organization chart; note on chart whether each unit is KU or not KU.
   - Locate specific units and titles of directors for each of the three KU services being studied; (be prepared: the formal organization may not coincide readily with the KU services)
   - The role of external, noncommercial organizations, if any; and
   - The level of effort (FTEs).]

   The chart should represent the current configuration of the network. Interorganizational collaboration (i.e., the functional ties) among the units should be indicated by drawing dotted lines.

2. What priority does each of the three KU services have, within its host agency context?

II. WHEN IS A NETWORK A NETWORK?

A. Basis for Relationships [For each of the units on the previous chart, please document the nature of the relationships among these entities. Four dimensions are possible:

	INTERORGANIZATIONAL	INTERPERSONAL
FORMAL	1. Overtly announced, shared sense of purpose 2. Formal pact or agreement 3. Permanent interorganizational units or overlapping memberships (e.g., board members) 4. Assignment of linking agents	7. Members of professional association 8. Other?
INFORMAL	5. Ad hoc interorganizational units 6. Instances of mutual decisionmaking	9. Interpersonal consultation (no interorg. requirement, however) 10. Working acquaintance 11. Carbon copy 12. Other?

B. Types of Relationships Among Participating Organizations [The first four questions reflect the four cells of the matrix; use the above 12 examples as probes to determine nature of dotted lines on chart.]

1. What are the formal arrangements between your unit and the others in the network? [If arrangements are reflected in specific documents (e.g., legislative mandates, interagency agreements), obtain copies of such documents.]

2. Whether there are formal agreements or not, can you name specific collaborative activities between the units? [See also Q. IV-B3.]

3. Do individuals in these units belong to the same associations, unions, or other professional organizations?

4. Do individuals in these units have working contact with each other? If so, what is the nature of these contacts?

5. Are there any special projects (e.g., an NDN facilitator award or other federal grants) that involve more than a single organization? If so, what is the nature of the arrangement? [Obtain copies of relevant documents.]

CAVEATS:

- Be careful to avoid definitions that imply the assessment of outcomes (e.g., the amount of information exchanged cannot be used to define the existence of a relationship). Such outcomes will be covered in the next section.
- Be careful to distinguish general linkages among the host organizations from specific linkages among KU activities or KU services.
- Try to assess the strength of the linkages in some way; we will want to use either the frequency or strength of linkages as an "independent variable" for later analysis.

III. WHAT ARE THE OUTCOMES OF NETWORK ACTIVITIES?

[These questions may be asked in relation to a specific KU service or the KU activities (network)* as a whole, depending upon the respondent. Be sure to keep the unit of analysis clear.]

A. Goods and Services

1. What are the major types of information that have been provided to LEAs or schools? [NOTE: Quantities are important, if available, showing extent of coverage of user population.]
   PROBE FOR:
   - Reports distributed: distinguish on-demand vs. unsolicited
   - Materials shared
   - Linker consultations
   - Requests for I&R services
   - Workshops or conferences held

   [NOTE: Whatever the commodity, identify documents or reports that indicate how many of each of the above items were involved, annually, over the last 3-4 years. Remember that documents need not be formal analyses; agendas, schedules, and other "unobtrusive" information are also relevant.]

2. What range of topics is covered by this information?
   PROBE FOR:
   - Curriculum topics
   - Grade levels
   - Administrative vs. classroom use

3. In what ways has the extent or mix of information changed, if any, since the network [KU service] began operating?
   PROBE FOR:
   - Changes in amount
   - Changes in content
   - Changes in form

4. What types of people/organizations prepare most of this information?
   PROBE FOR:
   - Extent of local knowledge production (within the network)
   - Extent of use of external assistance (e.g., materials from a lab or center)

5. How do you know whether the information is of high quality? Relevant to local needs?

6. What complaints, if any, do you typically hear about the information?

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*Throughout the following sections, any reference to networks refers only to the knowledge utilization (KU) part of the REA network.

7. As a result of the network's [KU service's] activities, is there any administrative information that routinely flows to the REA or the SEA?

   PROBE FOR:

   - Knowledge about LEA performance
   - Other administrative reports
   - Reports on use of materials as feedback for designing new materials or programs
   - Reports on needs

8. Are there other types of resources that flow to the REA or SEA as a result of the network's [KU service's] activities?
   PROBE FOR:

   - Funds or budget contributions
   - Personnel or positions
   - Other administrative resources
   - Compliance to regulations

9. Are there any facilities or equipment that are shared by members of the network [KU service]?

10. Describe a typical:

    - Workshop or conference
    - Linker consultation
    - Use of the IR facility

B. Utilization

1. How has the information produced by the network [KU service] been used by any LEA persons [not limited to specific LEAs selected for our study]? Give a specific example for each type of use.

   PROBE FOR:

   - Confirmation of existing practices
   - Changes perceptions or attitudes about education
   - Changes in educational practices

2. Do you know of any data that will show how often each of these types of use has occurred over the last year or so [not limited to specific LEAs in our study]?

3. In what ways, if any, have these types of uses changed over the last five years?

4. Have you personally made any use of the information from the network? If so, in what way?

C. Dysfunctions

1. Do you think that the formation of the network [KU service] has confused outsiders in any way?

   PROBE FOR:

   - How a user (e.g., teacher) knows where to make an inquiry.
   - How often inquiries are made to the wrong party within the network.

2. Do you think that it takes more time for the network [KU service] to accomplish its work, compared to the situation where a single organization could have carried out the same work?

   PROBE FOR:

   - Time taken to communicate (hold meetings, etc.)
   - Delays due to scheduling difficulties

3. Do you think that the network [KU service] has produced new conflicts among the participating organizations or personnel (e.g., applications for federal awards)?

4. In general, what are the major disadvantages of the network [KU service] arrangement?

D. Ability to Learn from Itself

1. To what extent are the network's [KU service's] activities dependent upon specific people who have been around for a long time?

   PROBE FOR:

   - Past turnover in incumbents, in which service has continued despite turnover
   - Any complaints about lack of continuity

2. Does any single person or organizational unit keep track of the network's [KU service's] activities, through records and documents?

   PROBE FOR:

   - Identification of specific "historian" role
   - How difficult it would be to use "historian's" files

3. Can you cite specific examples where the network [KU service] has improved itself as a result of some problem or complaint?

   PROBE FOR:

   - Redesign of service
   - Change in interorganizational arrangements
   - Reassignment of personnel

IV. HOW DO NETWORKS OPERATE?

[These questions may be asked in relation to a specific KU service or the KU activities (network) as a whole, depending upon the respondent. Be sure to keep the unit of analysis clear.]

A. Role of Funding Support

1. What has been the overall level of expenditures for the [KU service only] for the last five years? [May be duplicate of Q. I-D1.]

   PROBE FOR:

   - Dollar amounts
   - Number of staff (full and part-time)
   - Estimated full-time equivalents

2. For the [KU service only], what percentage of the revenues, for the most recent year or two, come from:

   - The state department
   - Federal sources (name specific awards, if any)
   - The REA's revenue base (special district funding)
   - Contributions from LEAs
   - Other

3. Are any of the funds available linked to specific feedback regarding the network's [KU service's] performance?

   PROBE FOR:

   - Annual budget reviews by LEAs
   - Renewals in awards related to performance

4. Have there been specific attempts to gain other federal awards than have been mentioned? What have been some of the difficulties, if any?

5. What about other state awards? What have been some of the difficulties, if any?

6. What about other LEA funds? What have been some of the difficulties, if any?

7. In general, what sort of funding or combination of funding do you think best suits the network's [KU service's] activities?

8. What do you think has been the main internal source of competition for funds for this network [KU service]?

   PROBE FOR:

   - Perceived higher priorities for other (non-KU) REA activities
   - Perceived higher priorities for other KU services

B. Role of Formal Commitments

1. Does the activity for this network [KU service] relate indirectly to other educational policies?

   PROBE FOR:

   - Collaboration due to passage of minimum competency-based testing
   - Collaboration due to LEA performance requirements
   - Collaboration due to union or other employee regulations (e.g., workshops as part of inservice)
   - Collaboration due to inservice requirements as part of court's desegregation order

2. Are there any committees or ad hoc teams that are integral to the network [KU service], and whose membership includes persons from two or more of the collaborating organizations? If so, what have been the functions of such groups?

3. Are any of the KU staff working for one organization but having part of their salary paid for by another organization in the network? If so, name the positions and the nature of the split support.

4. How important do you think that formal arrangements (e.g., agreements or any of the above) have been in operating the network [KU service]?

C. Role of Interorganizational Activities (also includes intra-organizational linkages)

1. How did the participating organizations (SEA, REA, LEA, etc.) collaborate, if at all, in designing the network [KU service] and its operations at the outset?

   PROBE FOR:

   - Decisions about staffing
   - Decisions about organizational location of various units
   - Decisions about initial level of effort
   - Decisions about curriculum topics to be covered
   - Decisions about types of products or reports
   - Decisions about types of information collected for feedback purposes

2. How do the participating organizations collaborate, if at all, in setting priorities from time to time (e.g., on an annual basis), so that the network [KU service] continues to serve the needs of each type of organization?

   PROBE FOR:

   - Same items as above, but in terms of changes that might be made from year-to-year

3. To what extent is the network [KU service] reviewed, monitored, or evaluated by the various organizations?
PROBE FOR:

   - Specific administrative reports
   - Interorganizational meetings or groups that review the KU activities [KU service]
   - Other means of formal communications among the organizations, regarding the individual KU service's yearly activities

4. To what extent are individual KU services coordinated with other [KU services] [name the two other services being studied as part of this network]?
PROBE FOR:

   - Combined supervision by some higher unit
   - Joint meetings, committees, etc., among personnel from more than one KU activity or service
   - Dependence on a single person (e.g., a linker) to perform the necessary coordination

5. Do you happen to know what kinds of activities are undertaken in other [KU services] [name the other two services, again]?
PROBE FOR:

   - Depth of knowledge about other KU activity's or service's priorities, products, or emphasis
   - Citation of specific events or products conducted by the other KU activities or services

6. In general, how would the KU services be improved, if at all, if the network's resources were devoted to a single organization (e.g., the LEA), in conjunction with an outside contractor?

D. Role of Interpersonal Activities

1. Is there a single person in each organization who is really responsible for making the network [KU service] operate smoothly? If so, please identify the name and title of these people.

2. Did you know any of these key persons before, either as a result of having worked in the same organization with them at some time in your career, or as a result of personal friendships?

3. How frequently do you contact these persons? What is the most common reason for this contact?

4. Are there any occasions (e.g., lunches) when you get together with these people on a less formal basis?

5. When there is a particular problem in identifying resources or handling an unexpected situation, what people do you consult, and how often does this occur?

V. WHY DO NETWORKS PERFORM SUCCESSFULLY?

[These questions may be asked in relation to a specific KU service or the KU activities (network) as a whole, depending upon the respondent. Be sure to keep the unit of analysis clear.]

A. Organizational Explanations

[Most of these explanations will be "tested" by reviewing the accumulated evidence from the fieldwork. However, specific questions should also be asked of individual respondents, and these questions are listed below.]

1. Do you think that the participating organizations derive mutual benefits from each other, as a result of being part of the network [KU service]?

   PROBE FOR: A "tradeoff" or "exchange" spirit, but identify what is being exchanged. E.g.,

MUTUAL EXCHANGE
- Increases in information
- Trades in the use of personnel or other resources
- Ability to use enhanced skills for other tasks
- Qualitative payoffs: prestige, greater legitimacy, etc., in relation to other organizations within the network

2. Can you identify specific benefits that the participating organizations have derived from organizations outside of the network [KU service]? PROBE FOR:

BENEFITS FROM OUTSIDE OF THE NETWORK
- Increases in project funding or overall budget, from federal or other external sources
- Increased prestige, legitimacy, etc., in relation to organizations outside of the network
- Increased power or authority in relation to organizations outside of the network

   EXAMPLES: Being awarded an NDN facilitator grant; being given national recognition for service accomplishments; being given greater authority vis-a-vis other intermediary offices in the same state (e.g., county office).

3. Do the organizations within the network [KU service] mainly collaborate because they have been mandated to do so? If not, please cite examples from the previous two questions, showing how the collaboration goes beyond compliance behavior.

COMPLIANCE

4. Do you think that differences among the participating organizations have been reduced as a result of their collaboration?
PROBE FOR:

CONFLICT REDUCTION
- Differences in objectives
- Differences in educational philosophy

EXAMPLES: REAs had a monitoring function, to insure that LEAs passed minimum competency requirements, and collaboration led to a better understanding of these different roles; SEAs had been pushing for statewide textbook adoption, whereas LEAs wanted local control, and collaboration led to compromise mechanisms.

5. In explaining the network's [KU service's] success, how important has it been for "users" to be involved in the design and operation of the network [KU service]?

6. In summary, what are the main reasons that you would give for understanding why the organizations have collaborated with each other?

B. Individual Explanations

[Again, most of the explanations will be "tested" by reviewing the accumulated evidence from the field work. However, the following specific questions will also be asked of individual respondents.]

1. What particular benefits have you individually gained from participating in the network [KU service]? Do you think you provided specific services or information in part as an exchange for gaining these benefits? Could you have obtained these benefits from other sources outside the network [KU service]?

MUTUAL EXCHANGE

2. Do you think there have also been less tangible rewards from your individual participation in the network [KU service]?
PROBE FOR:

SELF FULFILLMENT
- Desire to help others
- Pleasure in dealing with problems
- Pleasure in matching appropriate information to existing need for information
- Other day-to-day satisfaction in doing the job

3. [Refer to job background data from face sheet.] I note that you have had had an interesting series of jobs over the last few years [or some similar statement]. To what extent do you feel that participating in the network [KU service] has increased your individual chances for obtaining even better jobs in the future? Can you give any specific examples of possible next steps?

CAREER ADVANCEMENT

4. Overall, has your individual participation in the network [KU service] depended more on the exchange of benefits, less tangible rewards, or career advancement?

END OF DISCUSSION

(Complete Face Sheet and Observations Sheet)

OBSERVATIONS (For SEA, REA, and LEA)

A. Amount and prominence of space given to KU activities; proximity to host organization's director.

B. Prestige, importance, and status of KU people vs. comparable non-KU staff.

C. Inventory of materials; nature of records purportedly "used": are records worn out? Close at hand? Up to date?

D. Presence of visitors from other organizations, conducting KU business.

E. Apparent frequency of telephone calls; other communications or interruptions during your visit.